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OBSERVATIONS ON THE EFFECTS OF OXYGEN THERAPY

I. CLINICAL OBSERVATIONS IN HEART DISEASE

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AND

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CHICAGO

The past few years have witnessed the introduction into clinical medicine of an elaboration and intensification of the methods of administering oxygen-rich atmospheres for the amelioration of various diseases. Many workers and investigators in this field have published reports of their observations with results, for the most part, indicating the good effects of this method.

There is, however, some difference of opinion as to the degree of improvement to be expected from the use of oxygen, just which physiologic mechanisms it alters or modifies, and in which clinical conditions it is indicated. Certain claims for the efficacy of oxygen therapy may be considered unduly enthusiastic, even bordering on the extravagant—as is, unfortunately, so frequent an occurrence in the introduction of new or modified methods of therapy in clinical medicine. Conversely, certain reports may be accused of minimizing or disparaging its good effects.

In the present series of papers, an endeavor will be made by us (collaborating as a group in which are represented an internist, a physiologist, a biochemist, and their associates) to present the results of a combined bedside and laboratory study of a series of clinical cases in which oxygen therapy was employed, and thus to evaluate the rôle of an oxygen-rich environment as a therapeutic agent. In order to make this evaluation more accurate, an attempt was made to avoid as many other variants as possible. The patients were hospitalized for a short period before they were exposed to oxygen, and their management was stabilized. Observations made during this period were used as controls. The clinical management of the patient was kept as constant as possible during the course of the observations, excepting when the condition was obviously getting worse in spite of oxygen.

PREVIOUS WORK

The interest in anoxemia, or "oxygen want," was created to a large extent by the studies of Haldane [1] and Barcroft [2] and their associates on the effects of high altitude, which are summarized in reviews written by these authors. Following this work the conception developed, and is now generally accepted, that anoxemia is an important factor in many diseases. Barcroft [2] drew attention to the presence of several types of anoxemia, which shared a common symptomatology. The three major types are:

1. Anoxic anoxemia, in which the hemoglobin of the arterial blood is for one reason or another not saturated with oxygen; that is, the hemoglobin in the arteries does not have the full amount of oxygen it is capable of holding. This type of anoxemia occurs when the inspired air is low in oxygen, or the aeration of the alveoli is impaired, or the diffusion of oxygen from the lungs to the blood is interfered with, or when part of the venous blood is shunted into the arterial system without coming in contact with air-containing alveoli.

2. Stagnant anoxemia, in which the minute-flow of blood is diminished.

3. Anemic anoxemia, in which the concentration of hemoglobin capable of carrying oxygen is reduced, whether by loss of red blood cells, or by mutation of the hemoglobin; viz., into methemoglobin, carbon monoxide hemoglobin and the like.

Heart failure, as is well recognized, is accompanied by the stagnant type of anoxemia and many of its symptoms and effects are produced in this way. Shock and acute coronary thrombosis can be considered as causing acute forms of stagnant anoxemia. In heart disease, especially in subacute bacterial endocarditis and in the hypertensive type associated with chronic glomerulonephritis, a severe anemic anoxemia may be present.

As might be expected when the circulation through the capillaries is slowed, a greater reduction in the oxygen content of venous blood than is normal, that is, an increased venous unsaturation, was found in cases of heart failure by Means and Newburgh,[3] Lundsgaard,[4] Harrop,[5] Scott,[6] and Barach and Woodwell,[7] among others. In cardiac decompensation there also occurs an anoxic anoxemia, which was first demonstrated by Harrop,[5] who showed that the hemoglobin of arterial blood in heart failure was not completely saturated with oxygen, and this has been confirmed by Barach and Woodwell,[7] Campbell, Hunt and Poulton,[8] Rabinowitch [9] and others. Not all cases of heart failure have

From the Medical Clinic and the Heart Station, Michael Reese Hospital.

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this arterial oxygen unsaturation even when they have increased venous oxygen unsaturation, as was shown by Scott,[6] Meakins, D'Autrebande and Fetter,[10] Fraser, Harris, Hilton and Linder,[11] and Kininmonth.[12]

The usual clinical test for anoxemia is cyanosis. Presumably this is a measure particularly of the anoxemia in the capillaries of the skin or mucous membranes. As Lundsgaard and Van Slyke [13] have shown, the skin color is dependent on the concentration of reduced hemoglobin and not on the oxygen saturation of the blood. In other words, regardless of the oxygen saturation, cyanosis will occur when the reduced hemoglobin equals 30 Gm. per hundred cubic centimeters of blood instead of the normal 5 Gm. per hundred cubic centimeters. Naturally, as Wiggers [14] reemphasized, the skin is an imperfect colorimeter which is affected by the vascularity of the region examined and by the thickness and pigmentation of the layers overlying the vessels. Lundsgaard and Van Slyke [13] pointed out that it is primarily the reduced hemoglobin in the capillaries which gives rise to the cyanosis. They also showed that the reduced hemoglobin in the capillaries is roughly the average of that in the arterial and venous blood. Consequently, slowing of the circulation, local or general, will lead to cyanosis even without the presence of an appreciable amount of reduced hemoglobin in the arterial blood. Cyanosis is therefore an index of stagnant as well as anoxic anoxemia.

Severe anoxemia, whether produced by cardiac disease or otherwise, alters the action of the heart directly as well as in many indirect ways. The subject has recently been summarized by Wiggers [15] and only the most important facts will be repeated here. Anoxemia leads to an acceleration of the heart rate, an elevation of systolic pressure; a slight drop in diastolic pressure, and an increase in pulse pressure may or may not occur (Greene and Gilbert [16] and Schneider [17]). The minute volume of flow is decreased in advanced anoxemia (Schneider and Truesdell [18]), although milder degrees have apparently the reverse effect (Strughold [19]). This early stimulating effect and later depressant action is apparently a direct action on the heart and is accompanied by dilatation (Strughold [19] and Jarisch and Wastl [20]). In addition, Resnick [21] has recently shown that anoxemia influences the conduction system of the heart, mild grades improving and severe grades depressing auricular, intraventricular and auriculoventricular conduction. Fatty degeneration of the heart, according to Barach,[22] may result from severe anoxemia. Other effects are produced by the increase in organic acids, the changes in the carbon dioxide of the blood, and as a result of the dyspnea set up by the anoxemia (Wiggers [15] and Peters and Van Slyke [23]).

Apparently the first attempt to administer oxygen in the treatment of a patient with cardiac insufficiency was made in 1908 by Beddard and Pembrey,[24] who found that breathing was improved by inhalation of oxygen. This finding was confirmed by Barach and Woodwell [7] and by Campbell, Hunt and Poulton.[8] Barach and Woodwell [7] found that inhalation of from 40 to 60 per cent oxygen mixtures for two to four hours increased the arterial and venous oxygen saturation, in the former to almost normal values. The cyanosis decreased, the breathing became slower, the pulse rate decreased, the carbon dioxide of arterial and venous blood increased in some cases, slurring of the Q-R-S lessened in two cases with bundle branch block, and the amplitude of the deflection decreased. Benedict and Higgins [25] had already shown that the slowing of the pulse was an effect of increased oxygen environment in normal persons.

Campbell, Hunt and Poulton [8] found that with the decrease in ventilation following inhalation of oxygen the alveolar carbon dioxide content rose. Boothby and Haines [26] pointed out that oxygen treatment is valuable only in relieving the patient of the added load and danger of anoxemia and must be continued until the anoxemia is relieved.

An extensive series of studies on the effect of oxygen therapy in heart disease was made by Barach and his associates.[27] In one group of cases presenting congestive heart failure and cyanosis, four were on the basis of arteriosclerosis and myocardial degeneration; two were active rheumatic cases with arterial anoxemia, and one was of long standing rheumatic involvement with a small amount of arterial anoxemia. This last case was not improved by oxygen. After a stay in a chamber with between 40 and 50 per cent oxygen for a time up to five weeks, the degenerative and the active rheumatic cases showed the following:

1. Clinical improvement manifested by relief of dyspnea, orthopnea and cough, slower pulse rate and disappearance of cyanosis.
2. Increased arterial oxygen saturation.
3. Marked increase in the arterial carbon dioxide content, a tendency for the p_H to become more alkaline, a decrease in one case of lactic acid of the blood and, occasionally, a decrease in hemoglobin or red blood cells.
4. Decrease in pulmonary ventilation, usually with slowing of breathing.
5. Decrease in basal metabolic rate in a case in which it was elevated prior to administration of oxygen.
6. Decrease and subsequent disappearance of edema dependent on residence in 50 per cent oxygen, coming on from three to five days after commencement of oxygen therapy and associated with diuresis.
7. Increased vital capacity.

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The active rheumatic cases showed less striking changes than the degenerative, especially less diuretic action. Two cases of heart failure on the basis of pulmonary fibrosis and one on the basis of emphysema were also found to have similar improvement.

In four cases with coronary occlusion, Levy and Barach [27] found that oxygen therapy caused subjective improvement shown by relief of restlessness and respiratory embarrassment. Cyanosis was diminished or abolished, respirations slowed, Cheyne-Stokes breathing when present disappeared and the heart rate slowed. Barach [27] found in three cases of coronary arteriosclerosis in men in the fifth or sixth decade of life, accompanied by chronic cardiac pain present even while at rest in bed, that residence in oxygen lessened the frequency and severity of the anginal pain attacks. Baker [28] recently reported improvement of bundle branch block on administering an oxygen-rich atmosphere.

While oxygen therapy in recent years has made a fairly secure place for itself in the treatment of the pneumonias, in certain postoperative complications and some other diseases associated with cyanosis and anoxic anoxemia, its rôle in the treatment of diseases of the heart and circulation is still *sub judice* despite the reports quoted. It is in this type of disease that the major emphasis of our investigation has centered because we have felt the desirability of adding to our armamentarium any real advance in methods of treatment of this difficult and at times hopeless disease. Other types of cases were also included to serve, in a way, as controls.

METHODS

With only one exception, a patient with acute coronary thrombosis, each of the patients who served as a basis of this study was observed for varying length of time in the ward or in private rooms before being placed in the oxygen chambers or tents. A number of routine control observations were made and the patients' management and, if possible, the progress of the disease stabilized. The routine observations included the usual clinical history, complete physical examination, blood pressure determination, chemical examination of the blood, electrocardiogram and the following special examinations: arterial blood oxygen content and saturation, carbon dioxide content of arterial serum and p_H of arterial serum, the blood being obtained by puncture of the radial artery. Venous blood pressure both by direct and indirect method, vital capacity, pulmonary ventilation rate and breath holding time were also noted. In addition, the water intake and output were recorded.

The patients after this preliminary study were then placed in oxygen chambers [29] (in a few instances in oxygen tents) maintained at constant temperature (70 F.) and low relative humidity (30 per cent) with the proportion of oxygen kept between 45 and 50 per cent. The time of residence within the chamber varied from three to twenty-seven days. Several patients were returned to atmospheric air and subsequently returned to oxygen a second time, depending on the progress of the case and the particular problem under consideration. On the permanent return to the ward, observations were continued. The present report will deal only with the general clinical impressions and conclusions. The special examinations referred to are reported elsewhere.[30]

OBSERVATIONS

Six patients with various types of cardiac disease were studied: three, aged 38, 42 and 44 years, respectively, with the diagnosis of rheumatic heart disease; three others, aged 60, 61 and 73 years, respectively, of the group generally considered as the degenerative type of heart disease, associated with generalized arteriosclerosis, particularly of the coronary vessels.

We shall first present brief reports of these six cases and then discuss them with a view of analyzing the effects of oxygen therapy.

REPORT OF CASES

CASE 1.—Mrs. C. B., aged 42, a secundipara, admitted for the second time to the hospital, Feb. 25, 1931, had complained since September, 1930 of "heart trouble," pain and swelling of the abdomen, edema of the ankles and orthopnea. The condition became worse following a sore throat six weeks previous to admission. The diagnosis was made of rheumatic heart disease, mitral stenosis and insufficiency with cardiac hypertrophy, auricular fibrillation and advanced congestive heart failure (class III).

After two days in the ward she was placed in the oxygen room for a period of eleven days. She was removed from the oxygen room, March 10, and placed in an oxygen tent two days later in an apparently moribund condition. At the end of three days in a state of delirium she tore off the tent and it was not replaced. She was discharged thirteen days later.

It was the clinical impression that there was no improvement during the first oxygen-rich period but marked improvement during the second period, followed by subsequent further improvement until compensation was again established. The patient at present is completely compensated. Diuresis started sometime after leaving the oxygen tent and was apparently related to digitalization and not to oxygen therapy.

CASE 2.—Mrs. L. G., aged 38, a nullipara, admitted to the hospital, Sept. 21, 1930, had complained of "heart trouble," indigestion, palpitation, irregular pulse, orthopnea and edema of the legs since August, 1930. The diagnosis was made of rheumatic (and postdiphtheritic) heart disease, mitral stenosis and insufficiency with cardiac hypertrophy, auricular fibrillation, advanced congestive heart failure (class III) and recent infarction of the base of the left lung.

After fifty-five days in a private room she was placed in the oxygen room without other change in management. After a twenty-seven day stay in the oxygen room she returned to her private room, and she was discharged nineteen days later.

It was the clinical impression that there was improvement during oxygen therapy with progressive disappearance of the residual condition at the left base of the lung. The patient at present is completely compensated.

CASE 3.—Mrs. S. B., aged 44, a quadripara, admitted to the hospital for the fourth time, Aug. 13, 1930, had complained for the past twelve years, and especially during the past seven years, that following colds she had dyspnea, precordial pain, orthopnea, edema of the legs and swelling of the abdomen. Her previous hospital admissions were for recurrent congestive heart failure. The diagnosis was made of rheumatic (and postscarlatinal) heart disease, mitral stenosis and insufficiency, aortic and tricuspid insufficiency, cardiac hypertrophy, auricular fibrillation, recurrent advanced congestive heart failure (class III), and old and recent infarction at the base of the right lung.

After a stay of six months and fourteen days in the ward, she was placed in the oxygen room for eleven days. On removal she was kept in the ward for six days and again placed in oxygen for seven days. Three days after removal from the tent she died.

It was the clinical impression that no improvement occurred during oxygen therapy. Death occurred in spite of all methods

28. Baker, B. M., Jr.: The Effect of Cardiac Rate and the Inhalation of Oxygen on Transient Bundle Branch Block, Arch. Int. Med. 45: 814 (May) 1930.

29. These chambers, constructed by a grant from the Louis Asher Fund, have been made available for this research by Dr. William Thalhimer, who has organized the procedure in using them.

30. Katz, L. N.; Hamburger, W. W., and Rubinfeld, S. H.: Observations on the Effects of Oxygen Therapy: II. Changes in the Circulation and Respiration, Am. J. M. Sc., to be published. Cohn, D. J.; Katz, L. N.; Soskin, S., and Hamburger, W. W.: Observations on the Effects of Oxygen Therapy: III. Blood Chemical Changes, ibid., to be published.

of therapy, including oxygen. No diuretic action of oxygen was noted.

CASE 4.—Mrs. R. R., aged 60, an unipara, admitted to the hospital for the fourth time, July 15, 1930, complained of dyspnea, orthopnea, and severe agonizing precordial pain radiating to the left shoulder, lower jaw and left arm, two weeks before admission. Her previous admissions were also for heart failure. The diagnosis was made of arteriosclerotic heart disease, coronary sclerosis (with coronary occlusion), myocardial fibrosis with cardiac hypertrophy, angina pectoris, congestive heart failure (class III) and diabetes mellitus.

After four months in the ward the patient was placed in the oxygen room. On the sixth day of her stay in the oxygen room she died.

It was the clinical impression that the patient's course was progressively downhill. The patient was refractory to all forms of therapy, including oxygen. Oxygen had no diuretic effect.

CASE 5.—H. B., a man, aged 73, admitted to the hospital, Feb. 23, 1931, complained of sudden acute dyspnea, with cyanosis, pallor and productive cough, three days prior to admission. The diagnosis was made of arteriosclerotic senile heart disease, coronary sclerosis with recent coronary occlusion, paroxysmal auricular fibrillation, emphysema, and congestive heart failure (class III).

The patient was placed immediately in the oxygen room and kept there sixteen days. He was discharged from the hospital twenty days later.

It was the clinical impression that during oxygen therapy there was marked improvement with relief of dyspnea, lessening of cyanosis and drop in pulse rate. The moisture at the lung bases continued, and weakness and cyanosis returned after withdrawal from oxygen. No diuretic effect of oxygen was noted.

CASE 6.—Mrs. D. P., aged 65, a nullipara, admitted to the hospital, Jan. 2, 1931, suffered from vertigo, faintness and syncope, for ten days prior to admission. The diagnosis was made of arteriosclerotic heart disease, coronary sclerosis, myocardial fibrosis, partial auriculoventricular heart block and bundle branch block, Adams-Stokes syndrome, emphysema, no congestive heart failure (class II-b).

After three days in the ward she was placed in an oxygen tent for six days. After forty-four days more in the ward she was discharged.

It was the clinical impression that the patient's general condition improved during oxygen therapy, although no consistent change in the cardiac mechanism was observed. Oxygen had no diuretic effect.

COMMENT

Patient 2, a woman, aged 38, one of the three rheumatic patients, had rheumatic and postdiphtheritic heart disease with mitral involvement and auricular fibrillation, and was resident in oxygen the longest time (twenty-seven days). She was the only one to secure what might be thought to be entirely satisfactory results clinically, with a complete return of compensation, and with the clearing up of an extensive residual pulmonary process at the base of the left lung, which was either an infarction or a pneumonic consolidation. The improvement in this lung complication seems particularly suggestive in view of the long duration of the process, persisting over a period of fifty-five days in ordinary room air in spite of all other methods of therapy used prior to oxygen therapy. The conclusion seems most probable that the disappearance of the lung process must be related in some fashion to the only variant in therapy; namely, oxygen.

The results in the other two rheumatic patients were not so promising. Patient 1, a woman, aged 42, with mitral stenosis and auricular fibrillation, showed no improvement during the first period of eleven days of oxygen-rich atmosphere. In fact, during this period—possibly because of the temporary postponement of digitalis therapy—her clinical course became progressively worse. However, after forty-eight hours' return to the ward, at which time digitalis was started—her condition being more critical—oxygen was again administered, this time in a tent, since she was too ill to be returned to the chamber. All observers at this time agreed that it was the clinical impression that oxygen was a life-saving measure and that without it the patient would have undoubtedly died. After three days of oxygen the patient objected vehemently to the enclosure and tore the tent off, and from this time on she slowly became compensated. Her recovery was obviously also related to the use of digitalis. This patient illustrates that oxygen therapy cannot be substituted for digitalis in a case presenting auricular fibrillation with rapid ventricular action.

Patient 3, a woman, aged 44, the final rheumatic patient, the mother of four children, had rheumatic and postscarlatinal heart disease, and aortic, mitral and tricuspid involvement with auricular fibrillation. She failed to show any improvement whatever, in spite of two trials with oxygen of eleven and seven days, respectively. Death occurred three days after the end of the second administration of oxygen. In scanning this patient's history, one sees that the recurrent periods of decompensation extended over a much longer time than the others—twelve years—and with particular severity and increasing frequency during the past six or seven years, as contrasted with a history of decompensation of only six months in case 1 and only six weeks in case 2. Likewise, the extent and degree of cardiac involvement was much greater in this fatal case than in the other two. One therefore concludes that, although in certain patients and under certain conditions oxygen appears to be a useful and active therapeutic agent, its usefulness and activity are subject to restrictions similar to those applicable to other therapeutic agents, such as digitalis, physiologic rest, diuretics and morphine; namely, if the integrity of the circulation, the reserve strength of heart muscle and the competence of the heart valves are too far spent, no therapeutic agent, oxygen included, is of avail in restoring the vital force to the circulation, and death ensues. In this connection it may also be of interest to observe that this patient, who died, was the oldest of our small series, and her damaged heart had already successfully withstood the strain of four successive pregnancies.

Turning now to the three patients with degenerative heart lesions, the first, patient 4, a woman, aged 60, with arteriosclerosis and diabetes, and with a previous history of recurrent (three) hospital admissions for heart muscle failure, entered the last time with a history of obvious acute coronary closure. After approximately four months of ward care, during which time the clinical course of her disease was progressively downward, she was placed in the oxygen chamber with no appreciable benefit, death ensuing six days later. One must conclude again that, in the face of widespread, chronic, progressive disease, oxygen, together with other therapeutic measures, has definite and sharp limitations. One point, however, should be emphasized in this case; namely, that oxygen therapy was not used until very late in the course of the disease, at least four months after the attack. It is conceivable that, had oxygen been instituted earlier, the result might have been quite different. The value and need of the early use of oxygen in the pneumonias has been quite convincingly demonstrated and in all likelihood applies to its use in cardiovascular disease as well.

The second patient with degenerative heart disease, patient 5, a man of 73, with an arteriosclerotic disease of the heart, with an acute coronary closure three days

prior to admission, was placed in the oxygen chamber immediately on his entrance to the hospital. His subjective complaints of severe acute dyspnea, cough, restlessness and air hunger were immediately relieved, while objectively his cyanosis, pallor, pinched and anxious facies and mild tachycardia were measurably improved. After sixteen days of residence in the chamber he was removed to a private room, leaving the hospital three weeks later, apparently quite recovered except for the persistence of slight moisture at the bases of the lungs, some general weakness and pallor. His convalescence at home has been quite uneventful. While the patient might have recovered as promptly without oxygen, nevertheless one must be equally frank in definitely crediting oxygen with the prompt and effective relief of distressing subjective and objective conditions, thus possibly placing the heart and circulation in a most favorable situation for recovery. This alone, all would agree, is of great consequence and importance, both to the patient and to the physician, and of itself, in a given case, alone might justify the use of oxygen. Similar symptom controlling values are attributed to other therapeutic agents—morphine for controlling pain and dyspnea, digitalis for auricular fibrillation with rapid ventricular rates and diuretics for edema. While perhaps none of these are of themselves curative or crucial remedial agents, no physician, in his care of persons sick with heart disease, would care to get along without them.

The last arteriosclerotic patient, a woman, aged 65, with partial auriculoventricular block and an Adams-Stokes syndrome, was placed under oxygen to inquire particularly into its efficacy in improving intraventricular conduction as suggested by the work of Baker.[28] She remained in an oxygen tent for six days, during which time there was evident a general clinical improvement as evidenced by relief from the vertigo, the faintness and syncopal attacks from which she suffered, and a general impression of improvement in her restlessness, appetite and sleep. Careful and repeated electrocardiograms were taken before, during and after oxygen therapy, but without demonstrating consistent changes in the cardiac mechanism.

SUMMARY

We may summarize our impressions and conclusions at the present time as to the value of oxygen therapy in diseases of the heart and circulation by the general statement that it has a definite, though possibly limited, rôle in the treatment of these conditions. We feel that this general statement, in the light of our experience, should be further amplified and qualified as follows: It appears that in those cases associated with pulmonary complications, such as congestion or consolidation, infarction, edema of the lungs and the like, oxygen may be of particular value. We feel further that oxygen in no sense should be considered a substitute for the older, well accepted method of therapy, namely, the proper use of digitalis, morphine and diuretics, but should be used in conjunction with them to serve as a useful and valuable adjunct. In critically ill or apparently moribund cardiac patients an oxygen-rich atmosphere may prolong life, add somewhat to the comfort of the patient, or stop the downward course of the disease and aid in the progressive return of compensation. Miracles cannot be expected, and in the presence of prolonged, advanced, progressive cardiac disease, as is true also of other available therapeutic measures, oxygen cannot achieve the impossible. Additional factors, adding to the burden of a probably poor prognosis, are the age of the patient, and, in a woman with a damaged heart, the history of repeated pregnancies. As in pneumonia, if oxygen is to be used it should be instituted early and promptly if the best results are to be obtained.

Symptom controlling values are attributed to other therapeutic measures, viz., morphine for controlling pain and dyspnea, diuretics for relief of edema, and digitalis for slowing the ventricular rate in auricular fibrillation with rapid ventricular rate. While none of these are of themselves crucial remedial agents, their use is justified even though they sometimes fail to act. In like manner, even if cure or improvement are not always to be expected, the relief of dyspnea, cyanosis, restlessness, tachycardia, the contribution to the sense of well being, and improvement in appetite, color and sleep may well repay the time, effort and expense of instituting oxygen treatment.

PSYCHOTHERAPY AND GENERAL PRACTICE

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A recent number of the *Pennsylvania Medical Journal* contained a comment to the effect that the readers of papers before different medical groups should use care in ascertaining where their presentation might be most appropriately presented. "The physician who first and usually sees the patient is the general or family physician." For this reason, I wish to present briefly a few points about some of the patients who have been seen at the Institute of the Pennsylvania Hospital. These patients are those who have been greatly troubled with what is called general nervousness, depression, or other emotional difficulties. During the course of the day's work, both in the outpatient department and with the resident patients of the institute, one is astounded not only by the psychiatric difficulties and the evident need for good mental hygiene but also by the close association of these problems with those of general medicine found in the history or in the physical condition of the patient. Most of these patients are referred to the psychiatrist by the general practitioner, and the very troubles with which the psychiatrist is now dealing have undoubtedly been handled, knowingly or blindly, by the family physician, who, unfortunately, seems to be less and less in evidence. Since most of these patients go to see their family physician, it seems important that the experience gained by the neuropsychiatric specialists should be passed on directly and purposely to the physician who is usually consulted first, the general practitioner. One gets the impression that to handle some of these patients successfully the physician needs to be present in at least three identities; namely, doctor, confessor and lawyer. The present-day success of the shady sisters in therapeutics, as well as the popularity of unorganized quackery and charlatanism, is a warning of how necessary it is to manage skilfully the mental and emotional side of the patient, as well as his physical welfare. Many of the complaints and discomforts heard in office practice and in convalescence from serious illness or surgical procedure are out of proportion to the physical weakness present. Examination and treatment of the emotional life of such a patient

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may result in great benefit to the physical illness as well as to the mental readjustment.

There are certain times during the progress of each individual from birth to death when stress and strain seem to make greater inroads. For brevity, I shall discuss briefly one case taken from each age period in which the stresses or strains may be particularly troublesome.

The first, childhood, is that period of childhood wherein the child becomes aware of his own identity as a person in relation to the human individuals about him. At this time, accentuated by the arrival of a baby brother, one child learned that the physical comforts and also the paternal and maternal love must be shared with the newcomer, or with other identities in the environment. A physical illness at this time placed the child in the center of the picture again and he emerged victor over the anxious parents, at the expense of the other associates in the environment. No matter how skilfully the medical regimen and treatment may be carried out, if the psychologic and emotional factors of illness are not carefully considered, difficulty may follow. This is particularly true of those patients who have epidemic encephalitis or any other of several generalized illnesses wherein there may be a high fever or a prolonged convalescence. In such an illness there is an organic nervous system undergoing unusual sensitiveness in its reactions and readjustment. Likewise, the mental or emotional impressions of the child are oversensitive, and their reactions are liable to be more extreme. No specific example is cited here, for not a day goes by that many cases are not seen. This is the type of case which is called "behavior problem" and the patients fill our child guidance clinics, juvenile courts, and children's institutions, although but a small percentage of them are criminal or deficient.

The second age period needing special consideration is that period of transition from childhood into early adolescence, ordinarily called puberty. At this time a great change is seen in boys and girls physically, but this change physically can never be as evident to the outsider as the change in feelings and interests which are entertained by the individual within. The points of view of the child become altered to those of an adolescent who is aware of new stirrings and a new consciousness. A great widening of mental aspirations and contact, as well as greater interest in physical accomplishment, takes place. If this transitional progress is made intelligently and without undue interference by environmental demands, it is usually not too difficult. If there is some physical disability, it may act detrimentally. One 12 year old boy was told by his parents, on advice of the family physician, that he had serious heart trouble and must never play outdoors with the other boys or he would die suddenly. From the age of 12 on he limited his activities more and more, until he was remaining indoors constantly, living only in day dreams and phantasy formation. This widened in extent until it began to undermine the normal working of his mind, and he was approaching a serious mental disease. A long continued reeducation of this boy's ideas and habits helped to correct the condition, but much irreversible damage was done to his personality. A second boy had trouble in adjusting to the awakening of sexual life within him and developed periods of depression because of nocturnal emissions and an impulse to masturbation. Therapy on the psychologic side desensitized him sufficiently to remove the frequency of his emissions and the intensity of his attention on his sexual stirrings.

A third age period, in some ways associated with the second, comes when the young adolescent finds the responsibilities of the economic world descending on him. The extreme ambitions of youth must be curbed because of economic necessity for family or self. Emotional conflicts often result, and this tendency to emotionalism may be displaced on some minor medical or surgical illness. A young woman of 20 had intense dysmenorrhea every menstrual period, and spells of vomiting. In addition there were frequent spells of diarrhea, intense headaches and sleeplessness. Detailed medical examination revealed undernourishment, considered to be secondary, and slight malposition of the uterus, which was easily corrected. The patient did not improve in any way, although she "was told there was nothing wrong with her by three professors in a medical school." Treatment from the psychiatric standpoint aided her in disposing of anxiety over economic limitations, worry over irregularities in conduct of other members of her family, as well as removing much concern over physical discomforts and sensations. The headaches, sleeplessness, vomiting, and diarrhea entirely disappeared following the psychotherapy, and the dysmenorrhea was greatly relieved, although no new or special physical treatments were given that had not been for some time ineffectual. The physical treatments were necessary and were the most important treatment points of the case, but they were ineffectual until the other factors were handled in conjunction.

The fourth age period might be called the turning point in life and comes as the menopause or involutional period. It is almost as active on the emotional side in men as it is in women, although one is not conscious, usually, of any physical manifestation of its presence. Perhaps it is correctly called "the dangerous age," but not in the usual sense ordinarily meant. Up to this time the individual sees himself progressing, looking forward. Now comes the time when certain phases of life are past and he must look both directions. Some take the view that they are on the downhill side of life and do not adjust skilfully, not realizing that this may be the most useful time of life for real accomplishment for themselves and others. Illness of any type at this time hits heavily if a good attitude of mind is not present. A patient having had a rather disappointing life as far as family and loved ones are concerned was working intensely hard, endeavoring to have her work make up for what she did not have in other ways. She became more and more exhausted, feeling more and more discouraged. Loss of weight developed, a neuritis began, and she finally had to stop work. Medical treatment succeeded in stopping her loss of weight and relieved the neuritis, but with this advance there developed constant regurgitation of food, crying spells, weakness and dizziness on exertion, and an internal sense of emotional tension which the patient said "made her feel as if she were going crazy." Months passed and no progress was made, and she was getting more and more depressed because of her unimproved condition and loss of time at work, as well as loss of money. Psychiatric treatment over a few weeks' time gave her a chance to pour out the worries, disappointments and unhappy thoughts she had had for years, and she began at last to make a slow but definite improvement to a recovery which placed her on a level of efficiency in work and happiness that she had not enjoyed before in the major part of her lifetime. As is true in so many patients at this particular age period, the glances she was taking at the "downhill side" of life had consti-

tuted a great item in contributing to the activation of her anxieties.

The fifth and last age period which may be outlined definitely may be the most indefinite of them all. This time may come when the physical infirmities of beginning old age seem to be greater than the enjoyable experiences of life at the same time. Some "do not grow old gracefully" and the physical difficulties of late life may prove to be a source of too great concern and anxiety. Therapy from the psychiatric standpoint is certainly as difficult as from the medical and the surgical standpoint but does make its contribution in giving relief. One man of 66, in good condition physically, was left very weak and depressed following a severe attack of influenza. He became worried over his weakened condition and feared a penniless old age. He developed extreme anxiety over a temporary digestive upset. A slight irregularity of the heart increased this anxiety until he was so worried that he was sleepless almost every night. One worry about his condition supplanted another, although none in themselves were of any significance. The vicious cycle served to develop one functional physical difficulty after another, and effective medical therapy accomplished its result only after intensive emotional psychotherapy was instituted. This patient is similar to many that we know of who have found readjustment successful after turning to Christian science. The emotional outlet they obtained under such a banner achieved its result. It is regrettable that it happens far too often under such circumstances, and as a result other patients strive for the same result and lose opportunity for health and happiness.

Our cases are by no means limited to these age periods, but those cited serve as examples for these special times. The variation of symptom combinations is no more limited than that seen in any medical clinic and office. One woman of 70 was unable to rid herself of terrific headaches due to cerebral arteriosclerosis until she had some emotional problems worked out, reducing the hypertension with resultant relief of the headache. Another woman of 50 got no result from repeated medical cures for her alcoholism, although she could quit easily for indefinite periods under a hospital regimen. With the help of her physician she worked out some feelings of inadequacy and inferiority she had had, and a recourse to alcohol did not seem necessary. Perhaps she had an organic makeup which made it easier for her to become alcoholic, but she became better acquainted with her mental makeup or attitudes, to the extent that she was able to adjust more satisfactorily without the alcohol as a refuge. A middle aged woman had been troubled with digestive upsets for years. They finally subsided for no known medical reason, and immediately she began to think people were talking about her, planning things against her, and she showed the signs of a definite paranoid mental picture. The connection between the two conditions is difficult to understand, but some relationship is certainly suggested.

Therapy, whether purely physical or purely mental, achieves results. Thyroid disturbances are nearly as common in the office of the psychiatrist as they are in that of the internist. It is striking how a basal metabolism can be reduced to normal limits by living a proper physical regimen and carrying out proper medical treatment. In a woman of 27, in whom an active thyroid disturbance had proved resistive to treatment by rest, compound solution of iodine and other medical measures, it was more striking to see what reduction in the basal metabolism took place with clinical improvement in classic symptoms when a great deal of emotional readjustment was made.

There is one type of case that seems to be fairly common in our present experience. I am thinking of several patients who have very similar complaints and symptoms, consisting of a feeling of great lassitude and weakness, lack of initiative, and a sense of physical and mental inferiority. In many of these cases there is a progressive loss of weight or a very marked undernourishment. Cartoonists seem to be aware of the frequency of these individuals in the community, and their essential characteristics, for we all are familiar with the lanky characters of the comics who are usually depressed or irritable, pepless or discouraged, and complaining of their health. This type of case has proved very resistive to our usual medical therapy, the patient not feeling any improvement that remained constant nor gaining or holding weight at any acceptable level.

Psychotherapeutic work with these people has proved to be of some assistance in getting them to a better level, both mentally and physically.

One side seems to help the other. In the office of the general practitioner, where we see so many people carrying the usual cares and troubles of life, it seems important to give consideration to that side of their personality. The individual is really an integrated whole, consisting of mental and physical aspects, each dependent on the other and influencing each other most profoundly. The effective prescription given for the best interests of the individual and patient should, in the ideal sense, contain therapeutic elements that will act as a specific for the mental side as well as for the physical.

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TRAUMATIC INGUINAL HERNIA

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Ever since the word "rupture" was used to denote hernia, there has been a widespread opinion that trauma is the responsible factor in the causation of the condition. The supposed relationship between injury and hernia is still accepted almost universally by the public; but most surgeons and many physicians long ago abandoned this view, their disbelief being based largely on observations made at operation. In medicolegal cases this whole topic is a matter of controversial importance, often vexing and perplexing to all concerned.

Before the situation is considered in detail, one should familiarize oneself briefly with (1) the basic anatomy, (2) the surgical operative observations, and (3) the pathologic reports.

The anatomy of the inguinal region may be briefly said to consist of an avenue called the inguinal canal, the uptown end of which is the internal ring, and the downtown end the external ring. Marching along this avenue may be seen certain male habitués, the spermatic cord accompanied by nerves and blood vessels, which disappear from sight after they pass through the downtown ring. Normally, both of these rings are mere slits or holes, but in some persons they are perfectly definite

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openings existing since birth and thus these individuals are congenitally prepared to have these openings plugged by pouting peritoneum, which in turn forms a very definite protrusion, which is called a sac. Hence, a hernia starts by being born and thus, by a process of gradual growth, sooner or later becomes apparent to the possessor or to the examiner. In other words, a congenital or preformed sac is always the essential precursor, and in every respect it denotes an attempt to buttress a weak area with peritoneum. If this sac appears at the upper end of the avenue, it is called an oblique or indirect hernia; but if it appears lower down it is called a straight or direct hernia. It has been recognized, of course, that a direct hernia is more like a ventral hernia and that it represents a grade of muscle weakness far more marked than in indirect hernia. To this extent it can be said that an indirect hernia is always congenital and that a direct hernia may be congenital or acquired. If acquired, it is on the basis of the preexisting weakness. It is known that normally this region is well protected by an interlacing group of muscles and that these are covered by a strong fascia. It is also known that these muscles are sometimes flabby, that often their interlacing is defective, that the lower end of the canal (the inguinal triangle) is often left without any muscle barriers whatever. It is known, too, that the fascia is often quite thin and that many times it has slits and gaps without any apparent cause. The essentials of this anatomic foundation can be summed up by the statement that in every case of inguinal hernia there is a basic defect, a congenital anomaly, just as predestined as a patent foramen ovale, or a clubfoot, or six toes. Nobody disputes these fundamentals for they have been known for centuries, and each generation of mankind has been heir to them; hence this discussion relates not at all to the production of a hernia by a given injury but, on the contrary, revolves about the problem of the aggravation of a hernia by injury.

The question, then, is: What is the relationship of trauma to an already existing hernia? One can take the ground that the hernia is "congenital," that it is "incipient," that it is "potential," that either ring is "dilated" or "lax," and that the injury in question is the causative factor because it suddenly produced intra-abdominal pressure enough to make the hernia apparent to the patient or to the physician. Intra-abdominal pressure, *vis a tergo*, so to speak, is obviously the only possible source of the aggravation and hence the element of greatest importance.

I [1] have ventured to compare the birth of a hernia with the birth of a child. The inguinal canal can be said to represent the cervical canal, and the internal ring is like the internal os and the external ring like the external os. In the one case at "full term" the presenting part is a fetus and in the other case a hernia. But in each case there was previous impregnation, continued growth, gradual dilatation and *vis a tergo*.

If, then, there is no formation of a hernia due to injury, except in the presence of actual laceration (virtually incisional hernia), what are the essentials of aggravation? This can be summated by saying that adequacy is the basic factor. If the violence is sufficient to produce enough intra-abdominal pressure to make the hernia evident, then this sudden onset should give appropriate immediate symptoms. In other words, anatomic and surgical common sense tells one that any quiescent sac suddenly dilated must inevitably register symptoms. It is known that any tug or enlargement or twist of a sac composed of peritoneum always becomes manifest; that has been seen during an operation on a developed hernia under local anesthesia with the patient half asleep from morphine or barbital. If it registers thus in a patient supposedly inert, how much more should it register in a patient unprepared? It is also known how a patient under local anesthesia reacts to manipulation of the omentum, the intestine or the region of the vas or testicle. And yet, despite all this, there are some who maintain that a hernia can be assigned to a forgotten or distant injury, and that the presence of the lump itself is all that is necessary to connect the accident and the alleged sequel. They reason that there must be some overt act to make the hernial mass appear, that this "something" is strain registering as intra-abdominal tension. It is the "last drop" that fills the pitcher and causes it to overflow, and hence this "last drop" is the responsible factor. That sort of reasoning could also adequately answer the question: "Who won the war?" or "What caused the depression?" It is the same kind of reasoning that asserts that the last pain gave birth to the child. If there is to be a relationship between the accused injury and the resultant hernia, there should be certain demonstrable proofs. What are some of these?

1. *Adequate Violence.*—This presupposes intra-abdominal pressure. Hence the nearer and more direct the violence, the greater the probability. A blow on the back should be by far a less likely factor than a blow on the abdominal wall. A strain of the abdomen, as by lifting or pushing or pulling, is an adequate cause of intra-abdominal pressure; so is repeated coughing, vomiting, straining at stool.

2. *Adequate Effects.*—These should be immediate for the reasons already given. Pain is the chief sign and it often is of the testicular variety, sufficient to cause imminent syncope, nausea and sometimes vomiting. Swelling ensues promptly and often this is accompanied by edema or ecchymosis. Tenderness on pressure is present, and the patient should protect himself accordingly. Disability due to these three cardinal signs should be immediate and in duration is proportionate to the extent of the increase in the size of the original hernia.

If pain, swelling, tenderness and disability occur as the immediate result, what will the physician find on examination? Obviously these subjective signs will be made objective by palpation, and if ecchymosis is present, further corroboration is afforded. A sac suddenly dilated is painful, and any manipulation of it will be resented, even after the lapse of twenty-four hours or more.

If, then, the foregoing prevails, there is no question as to the relationship, as to the adequacy of the cause or the effect. These are the criteria that make the determination as between the ascribed or claimed, and the ascribable or actual, cause. The patient may honestly enough believe that his manifestations are due to a given source; but the physician can prove by the history and the examination whether or not his surmise is correct. The patient may believe that his attack of colic was due to green apples; but the physician knows that it is due to gallstones. The patient may think that his pain in the back was due to lumbago from sitting in a draft; the physician knows that it is due to a kidney calculus. Not many people now believe that typhoid comes from sewer gas, but twenty years ago that was a

1. Moorhead, J. J.: Traumatic Surgery, Philadelphia, W. B. Saunders Company, 1917.

rampant etiologic assertion. Ten years from now the traumatic origin of hernia will be just as obsolete. The older textbooks, in listing etiologic factors, would acclaim as chiefest of all "alcohol, syphilis, gout and trauma." The "and trauma" is still present, but it also is on the way out as a scapegoat.

If, then, these essentials are necessary to link the hernia to the injury, what is to be said regarding the typical case, the vast majority of them, in which the patient finds the lump and then recalls some injury more or less remote? How can the pain be accounted for when the patient says: "I remember I had a sudden sharp twinge and I found a lump that night?"

My belief is that the sac is at times empty and at times filled. That is known, because of the many cases in which at one time a lump has been seen and felt and again no lump could be demonstrated, even after coaxing it to appear by all sorts of strains. If the sac is empty or filled, a puff of gas, a twirl of the omentum, a pinch of the neck of the sac, a contracture of overlying muscle, a wrench of the nerve—all or any of these can cause temporary pain. But pain itself, as previously stated, is not enough; there must be evidence of distention of the sac before the accusation is susceptible of surgical proof, and this registers by the signs already narrated.

Now, aside from these definite signs of aggravation, there are certain collateral clinical facts that make me say that aggravation of an already existing hernia is extremely rare as the outcome of any kind of trauma.

Statistics show that in the draft age (from 21 to 30 years) of approximately 2,754,000 men examined, 4 per cent of them had hernia well enough developed to be nonacceptable for full military service. If in that decade of 21 to 30, forty in each thousand had a hernia, how many in the decades beyond this must have hernia?

If this is so, a large proportion of male patients treated for other things must have hernia. Obviously, the greater the injury the greater the possibility of aggravation. Hence fracture of the pelvis, the hip, the spine should often be accompanied by signs of aggravation of a preexisting hernia. In my own experience with the injured I have never encountered hernia as a complication of trauma of any type, crushing abdominal and chest injuries included. This to me is one of the best proofs that isolated trauma is an exceptionally rare accelerating factor. It is pertinent to add that incarceration or strangulation occasioned by trauma is also exceeding rare. Most patients with strangulated hernia enter the hospital after working hours, usually in the early morning hours. My observation is that strangulated hernia is less common than formerly, and certainly I am now less often called out of bed to operate for this acute abdominal condition.

If thus far the improbability of an isolated or single trauma being responsible has been stressed and if hernia has failed to be found as an associate of severe adjacent injuries, is there still further proof? Yes, there are two more. One is the operating table proof, the biopsy. If the hernia is recent, a matter of hours or a few days, then certainly there should be demonstrable evidences such as edema, exudate, hematoma, recent adhesions and engorgement of vessels. I have never seen any such manifestation, and in a number of my cases the operation has followed the alleged onset by only a few hours. What are the manifestations? The classic situation is that the sac is hidden, that it has to be searched for and, when found, is detached only by dissection of adhesions that give every indication of long duration. Further, the size, texture or consistency of the sac is no index as to its age, for it is known that some old hernias have thin sacs and some new hernias have thick sacs. Likewise, the contents of the sac afford no clue as to the duration unless the group in which bands of adhesions bind the intestine or omentum to the sac is excepted. There is also that group in which the omentum is worn smooth and has assumed a conical or tapered contour from long residence in the sac. It is against every precept of abdominal surgery to expect recently traumatized intestine or omentum not to show appropriate evidences of irritation such as edema, exudate, hematoma, and fibrin flakes. All these are absent, even in recent cases, and the point is that at the operating table practically every case gives manifold evidences of ancient origin.

There is still another proof, namely, the pathologic observations. Some years ago Smith of Waterbury, Conn., called attention to the value of submitting the removed sac to the pathologist to determine whether or not there were signs of recent traumatic or inflammatory changes. Surely that should be a crucial proof, and, accordingly, there has been a pathologic report in practically all of the 232 cases used for the purpose of this review. The constant finding is chronic peritonitis, and the pathologists are of the opinion that it would require at least one year of irritation to convert the normal peritoneum of the sac into the state of chronic irritation usually encountered.

Here, then, are assembled a series of proofs to demonstrate that the assertion of the patient should not be accepted in view of the anatomic, surgical and pathologic proofs to the contrary. It is another example of the fallacy of accepting the assigned instead of the assignable cause. One is assertion; the other is demonstration. The vast majority of people believe that a blow on the breast is a precursor of that tumor which subsequently appeared. As medical men we know that this relationship is exceedingly rare and that in the vast majority of instances the blow was a mere coincidence.

Now, in the formation of hernia, in the development and inevitable progression of this condition, constant or repeated intra-abdominal strain is, of course, a factor in the march toward the external appearance of the "lump." But that is not the theme of my remarks, and I take no exception to the assertion that continued or repeated strain is an important element. As a matter of fact, I believe that every potential hernia grows, assuming that the individual subjects himself to repeated intra-abdominal strain, as represented by such every-day incidents as work, play, straining at stool, coughing, sneezing, vomiting and the like.

In passing, the question of recurrence after operation is of importance. Published statistics vary as between 2 per cent and 17 per cent, and obviously there is no such wide disparity if identical cases are subjected to review. The low rates of recurrence include children, women, and those in nonlaborious occupations; and in this group relapses naturally will not be numerous. If workmen alone are cited, then the recurrence rate will be higher, and, of course, recurrence will be greater in the direct than in the indirect varieties. A direct hernia, as stated, is virtually a ventral hernia and indicates that the possessor has weak abdominal supports to begin with and thus is not a good candidate for surgical repair. My own rate of recurrence among workmen is approximately 9 per cent, and to me the causes

of operative failure are usually assignable to one of the following:

1. Incomplete closure of the external or internal ring.
2. Failure to recognize the coincident occurrence of indirect and direct hernia.
3. Postoperative complications such as coughing, vomiting or infection.
4. Excessive abdominal strain after leaving the hospital.

The majority recur within the first six months, but no final estimate of success or failure is worth much until five years has elapsed.

As to type of operation, I favor the Bassini method, with or without transplantation of the cord, and double suturing of the fascia. I have not used fascia lata except in that group in which the inguinal triangle has to be patched or protected because of inability to suture the muscle to the fascia, notably in the direct and recurrent varieties.

I use chromic catgut for the deeper layers and nonabsorbable material (cotton or silk) for the skin.

My former practice was to allow the patient to get out of bed on the twelfth day, but in the past two years I have modified this on the theory that early mobilization was just as good practice in hernia surgery as it is in fracture or joint surgery. Hence I now allow the patient out of bed on the eighth day, believing that in a selected group there will thus be less disuse atrophy and hence earlier return of normal support. By this plan I believe that the recurrence rate is lessening. I permit return to light work two weeks after leaving the hospital, and resumption of full work two weeks later. I caution all the men to bend forward when lifting or straining so that intra-abdominal pressure will thereby be lessened.

There is a group in which muscle and fascia are so firm that mere tying off of the sac is apparently all that is required. By contrast there is another group in which every resource appears inadequate for holding purposes. I am thereby reminded of my experience with other types of trauma, notable fractures. There is an inherent indeterminable healing factor in every individual, and until one tries, one does not know what this factor actually is. In hernia repair as in wound or fracture repair, there is the unknown "nonunion" element that cannot be appraised until success or failure announces itself by the lapse of time.

STATISTICS

Statistics have been compiled by my assistant Dr. Walter D. Ludlum, Jr.

In two hundred and thirty-two consecutive adult male cases, 182 were unilateral and 50 were bilateral; there were 18 recurrent cases. Ninety-five per cent of the men were between the ages of 20 and 60 years; 52 per cent between 20 and 40. The average age was 37.5 years. The greatest proportion, 32 per cent, occurred in the fourth decade, from 30 to 40.

The duration in 12 per cent was less than one week; in 40 per cent, less than one month; in 75 per cent, less than one year.

The onset was sudden in 66 per cent, the result of a definite strain in 60 per cent, and of a gradual onset in 34 per cent.

It was direct in 25 per cent, indirect in 23 per cent, and direct and indirect in 36 per cent.

In the last five years, spinal anesthesia has been used in 86 per cent and gas ether in 14 per cent.

The Bassini operation was used in 47 per cent; the Bassini without a cord transplant in 40 per cent.

The recurrent group included eighteen cases, or 8 per cent. The time since prior operation averaged six and one-half years. The average duration of recurrence was twenty and one-half months; the average duration of symptoms, four and one-half months.

Complications included one death (0.4 per cent) from peritonitis due to bladder injury; pneumonia or pulmonary complications, 6.8 per cent, and suppuration, 3.8 per cent.

In 63 per cent of the series reported, fibrous thickening of the sac occurred in 52 per cent, inflammatory changes took place in 16 per cent, fibrous and inflammatory changes took place in 10 per cent, and no changes were found in 22 per cent.

The same figures pertain to the group with sudden or with gradual onset.

CONCLUSIONS

1. The preformed sac is the essential factor, and this is the congenital element of greatest importance.
2. Every inguinal hernia in the adult male has an inherent and inevitable tendency to increase and, sooner or later, may become manifest to the possessor or to the examining physician.
3. Aggravation of the hernia by some form of intra-abdominal pressure can be accomplished if the violence is adequate and the symptoms are appropriate. These symptoms are immediate in onset and consist essentially of pain, nausea, swelling and local tenderness.
4. Aggravation in reality is less common than is suspected (*a*) because evidences of it are almost never seen in the presence of even severe contiguous injury, (*b*) because at operation there are no local signs of recent trauma, and (*c*) because the pathologic examination also fails to show evidences of recent trauma.
5. A postoperative recurrence rate of approximately 10 per cent occurs among workmen.
6. Prolonging the period of postoperative convalescence may hinder rather than benefit the patient by inducing muscular atrophy of disuse.
7. The relation of hernia to a given trauma can be proved only by (*a*) the history of intra-abdominal pressure followed by immediate symptoms, (*b*) the operative observations, and (*c*) the pathologic report.
8. An isolated or single injury is never the source of origin of inguinal hernia, and aggravation or acceleration by trauma is exceedingly rare.
9. Traumatic inguinal hernia is a myth that should be consigned to the museum of historical relics of a bygone era.

115 East Sixty-Fourth Street.

The Sun Today and Yesterday.—The radiation from the sun is at the expense of its mass. No less than 360,000 million tons of matter is destroyed every day in order to maintain the present radiation of the sun. Poor old Sol weighs 360,000 million tons less today than he weighed at this time yesterday! By our human standards this prodigal expenditure cannot keep up for very long, but our human standards are not astronomical standards. Computation shows that the sun is not very much different today than it was when the planets were born. The weight of the sun is so inconceivably great that in order to show any material change in weight or radiation we must go back, not 2,000 million years, but five million million years. The sun weighed about twice as much then as it does now, and was correspondingly brighter and hotter.—Maxim, H. P.: What Is It All About? *Scientific American*, April, 1932, p. 199.

MEDIASTINAL DERMOID CYST

REPORT OF A CASE IN WHICH THERE WAS PANCREATIC TISSUE, SIMULATING INTRATHORACIC GOITER

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The mere addition of another case of mediastinal dermoid cyst to those already recorded in the literature would hardly seem to be justified. Our purpose in reporting the following case is to emphasize the possibility of the confusion of mediastinal dermoid cyst with intrathoracic goiter, and more particularly to record the occurrence, unique in this case so far as we have been able to determine, of pancreatic glandular and islet tissue in the cyst wall.

REPORT OF CASE

A woman, aged 35, entering the Cleveland Clinic Hospital, Oct. 22, 1929, complained of marked dyspnea on exertion and of a tumor in the suprasternal notch.

The tumor, which was first noticed two years previously as a slight, tender swelling, had persisted for two days and then disappeared. At that time the roentgenographic examination of the teeth gave negative results; the tonsils were removed on account of chronic infection. Since its first appearance the swelling had recurred intermittently in the suprasternal notch and above the sternal end of the right clavicle, remaining for a few days and then subsiding.

At the time of admission the patient complained of shortness of breath, difficulty in swallowing, a slight nonproductive cough and hoarseness. There had been no increased nervousness, no loss of appetite or weight and no gastro-intestinal or genito-urinary symptoms. The patient was well developed and was not acutely ill. The past and the family history revealed nothing of importance.

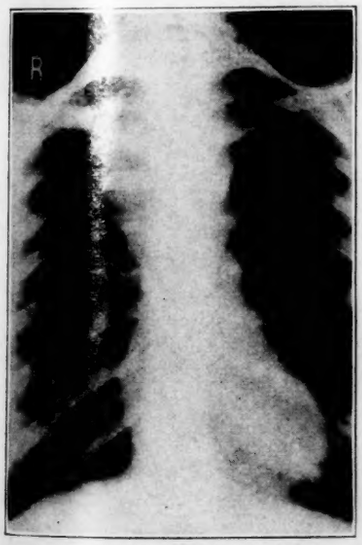

Fig. 1.—Appearance of the chest, showing the mediastinal tumor.

Physical examination showed a tumor mass about the size of a hen's egg protruding into the suprasternal notch. During the act of swallowing, this mass followed the movement of the trachea. There was no thrill, bruit or pulsation. An area of upper mediastinal dulness extended 4 cm. to the right and 5 cm. to the left of the midsternal line. Examination of the heart, lungs, abdomen and extremities revealed no significant abnormality.

A roentgenogram of the chest (fig. 1) revealed a large tumor mass in the upper mediastinum, which was interpreted as a substernal goiter extending down to the third interspace anteriorly. The red blood cells numbered 4,000,000; white blood cells, 9,200; hemoglobin, 75 per cent. The basal metabolic rate was minus 7 per cent. The blood sugar before operation was 108 mg. per hundred cubic centimeters, one and one-half hours after eating. The blood sugar after operation was 75 mg. per hundred cubic centimeters fasting. The Wassermann and Kahn reactions were negative. The urine was essentially normal on four examinations.

A clinical diagnosis of substernal goiter was made, and the patient was operated on by Dr. G. W. Crile. Under nitrous oxide-oxygen anesthesia and procaine infiltration a low collar incision was made as for thyroidectomy The pretracheal fascia and muscles were separated in the median line, an apparently normal thyroid gland being exposed. Below the isthmus of the thyroid and bulging into the suprasternal notch could be seen a tumor mass which extended into the mediastinum and apparently had no connection with the thyroid. Early in the process of freeing the tumor, a cyst was ruptured and approximately

Fig. 2.—Section of the cyst wall showing the mass of lobulated pancreatic tissue; slightly reduced from a photomicrograph with a magnification of 6 diameters.

150 to 200 cc. of thin, brownish fluid escaped. The character of the fluid suggested that the lesion was a dermoid cyst. The partially collapsed cyst wall was removed with considerable difficulty, on account of its intimate relationship to surrounding mediastinal structures. After the removal of the cyst, a large cavity, measuring approximately 12.5 cm. vertically and 7.5 cm. transversely, remained, bounded below by the arch of the aorta, anteriorly by the sternum, on the right by the innominate artery and vena cava, and on the left by the carotid and subclavian vessels. Posteriorly, the cyst wall was in relation to the trachea and bronchi. After the cyst had been removed, the cavity was rinsed with saline solution and lightly packed with petrolatum acriflavine gauze. The operative wound was left open in order to allow free drainage. The patient was in excellent condition at the completion of the operation.

The postoperative reaction was slight, and on the second postoperative day the cervical wound was closed around a small rubber catheter. The wound healed satisfactorily and the patient was discharged on the eighteenth day after the operation. At the time of discharge, abductor paralysis of the right vocal cord was present.

One year following the operation, a letter from the patient stated that she was in excellent health, that there was no evidence of recurrence, and that she was not hoarse.

Macroscopically, the tissue received in the laboratory consisted of a ruptured, collapsed cyst wall, weighing 45 Gm. and measuring 12 by 6 by 1.5 cm. It was irregularly pear shaped. The cyst wall was fibrous and varied from 3 to 15 mm. in thickness. The inner surface was rough and somewhat trabeculated and had numerous small masses of yellowish-brown granular material adherent to the lining. There were numerous small outpouchings in the wall and several small, round, pouched-out areas, suggestive of ulceration, but without any plastic exudate. In several areas, irregular masses of yellowish tissue were present in the wall, limited chiefly to the inner half. No hairs and no cartilage or bone could be recognized on gross examination. The outer surface of the cyst consisted of irregular, shaggy, fibrofatty tissue on the posterior aspect and a comparatively smooth, shiny, membranous layer on the anterior aspect.

Microscopically, the inner lining of the cyst consisted largely of fibrous tissue devoid of epithelium, but in some areas, particularly the thicker portions of the cyst wall, were fragments

From the Cleveland Clinic.

of stratified squamous epithelium, without keratohyaline material or hair shafts. Beneath this were a few lobules of sebaceous glands. No coil glands were recognized. In other areas, the inner lining consisted of simple, columnar mucus-secreting epithelium, and beneath this was a large mass of nonencapsulated, lobulated, glandular tissue and ducts lined with cuboidal epithelium (fig. 2). This tissue had the morphologic characteristics of pancreas (fig. 3). Scattered throughout this area were numerous small and large, solid masses of pale cells,

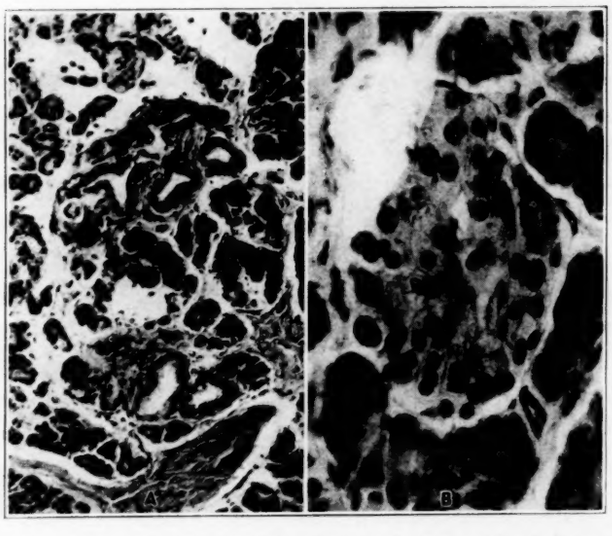

Fig. 3.—*A*, pancreatic glandular tissue and ducts; reduced from a photomicrograph with a magnification of 150 diameters. *B*, pancreatic islet and glandular tissue; reduced from a photomicrograph with a magnification of 500 diameters.

morphologically similar to islet tissue. In other areas, the inner lining of the cyst was made up of stratified, columnar, ciliated epithelium, beneath which were a few small mucous glands in the stroma, suggestive of pharyngeal mucosal structures. In this general neighborhood were several small islands of hyaline cartilage and fatty tissue in the cyst wall, but no bone or dental structures were observed.

The middle zone of the cyst wall consisted of collagenous, fibrous tissue showing extensive hyalinization and areas of mucoid degeneration. In numerous areas there were irregular small and large collections of phagocytic cells containing yellowish-brown blood pigment and considerable lipoid material. A few scattered islands of perivascular lymphocytic infiltration were also found.

In the outer layers of the cyst wall, several centimeters from the site of the pancreatic tissue, there were small masses of lobulated, colloid thyroid tissue (fig. 4 *A*), with vesicles lined by flattened epithelium, and considerable thymic tissue containing Hassall's corpuscles (fig. 4 *B*). Some of the latter tissue extended well into the fibrous wall of the cyst and appeared to be somewhat compressed and atrophic. In such areas, Hassall's corpuscles were not present.

The most frequent location of intrathoracic dermoid cysts is the upper mediastinum. They are usually situated medially but may extend laterally so that the major portion of the mass appears to the right or left of the midline. Generally, they are entirely within the thorax, but in about 10 per cent of cases [1] a swelling is apparent in the neck. The tumors vary greatly in size and consist of simple epidermoidal components or complex teratomatous growths. The symptoms are chiefly those due to mechanical obstruction, to compression or to irritation of surrounding structures and are dependent largely on the size of the mass. The principal complication is infection, which may terminate in the formation of an abscess, with spontaneous rupture, mediastinitis, perforation of the trachea, emphysema, pneumonia or pulmonary abscess. Malignant neoplastic transformation occurs in about 15 per cent of cases.[2]

The literature concerning intrathoracic dermoid cysts has been reviewed by Kerr and Warfield,[1] Williams,[2] Hertzler,[3] Harris,[4] Hale [5] and others. These articles form a complete bibliography.

COMMENT

The case reported illustrates how easily a mediastinal dermoid cyst may be mistaken for an intrathoracic goiter. The comparatively rare occurrence of the former as contrasted with the frequent occurrence of the latter lesion is probably one of the reasons why the differentiation is not made clinically more frequently. In cases of intrathoracic goiter, it is usually possible to detect a direct continuity between the thyroid itself and the mediastinal swelling. On the other hand, in 90 per cent of the cases reviewed in the literature, the mediastinal dermoid cyst is not in continuity with the thyroid. Therefore, demonstration of this continuity, or the absence of continuity, may prove to be a useful sign in making the correct diagnosis, although up to the present we have not had occasion to confirm this suggestion.

Misinterpretation of thyroidal and dermoidal lesions, at operation and on gross examination of the removed tissue in the laboratory, may occur also in another direction. A broken down, necrotic, cystic adenoma of the thyroid, whether cervical, partially or completely intrathoracic, may be mistaken for a dermoid cyst on account of the nature of the contents and the character of the cyst wall. Such tumors generally are a part of the thyroid, and microscopic examination after their removal suffices to make the distinction.

In the title the tumor is stated to be a dermoid cyst. Its very complexity, however, probably necessitates its being classified as a teratomatous cyst. Derivatives of three germ layers are represented, namely, stratified squamous epithelium and sebaceous glands; ciliated columnar epithelium and pharyngeal mucous glands; thyroid and thymus; pancreas; fat and cartilage.

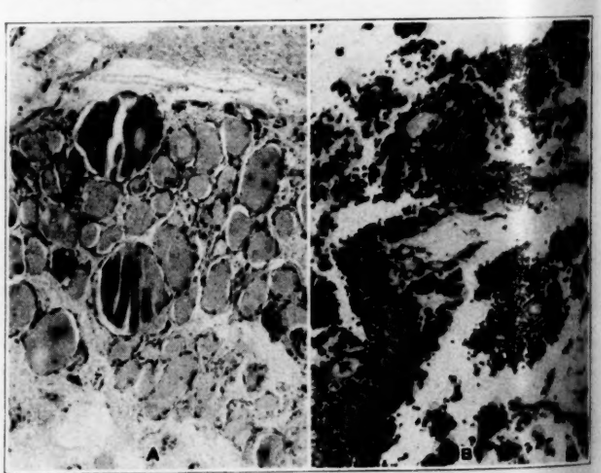

Fig. 4.—Section from the outer layer of the cyst wall: *A*, thyroid tissue; reduced from a photomicrograph with a magnification of 100 diameters. *B*, thymic tissue; reduced from a photomicrograph with a magnification of 150 diameters.

1. Kerr, H. H., and Warfield, J. O., Jr.: Intrathoracic Dermoids with Report of Case of Total Extirpation at One Sitting by a New Method of Thoractotomy, Tr. Am. S. A. **46**: 291-313, 1928.

2. Williams, W. R.: Dermoids of the Thorax, M. J. & Rec. **128**: 618-622 (Dec. 19) 1928.

3. Hertzler, A. E.: Dermoids of the Mediastinum, Am. J. M. Sc. **152**: 165 (Aug.) 1916.

4. Harris, I. B.: Mediastinal Dermoid with Report of Case, Ohio State M. J. **15**: 547 (Sept.) 1919.

5. Hale, H. E.: Dermoid Cyst of Mediastinum, with Transmitted Pulsation, Med. Rec. **98**: 1019 (Dec. 18) 1920.

The branchial apparatus would seem to be the most probable source for the particular combination of tissues present in the cyst wall and the tumor may be looked on as an inclusion cyst. In this sense, it is not exactly comparable to those ovarian dermoids in which a totipotential germ cell is capable of differentiation in all the tissues of the body.

The thyroid tissue in the cyst wall in our case is probably of lateral branchial rather than of median pharyngeal origin. Its intimate association with thymic tissue would seem to warrant this conclusion. The occurrence of tissue having morphologic characteristics identical with those of the pancreas is of interest and has not been reported heretofore as occurring in a mediastinal dermoid, as far as we know. The presence of this tissue as a pharyngeal derivative is not so readily explained without invoking the theory of metaplasia. The salivary glands and the pancreas are physiologically related organs but originate at widely separated points in the entodermal tract. If the primitive pharyngeal epithelium can differentiate into such diverse organs as the salivary glands, the thyroid and the thymus, it is not inconceivable that the pancreatic tissue in our case may likewise be of pharyngeal origin.

As was noted in the case report, no significant disturbance of sugar metabolism was detected.

SUMMARY

A dermoid cyst of the anterior mediastinum, extending into the neck and simulating a substernal goiter, was removed through a low collar incision as in thyroidectomy. Recovery was complete and the patient reported that she was in excellent health, one year following the operation.

The presence of histologically normal pancreatic tissue in the cyst wall makes this case unique.

2050 East Ninety-Third Street.

THE REPAIR OF UNUNITED FRACTURE OF THE NECK OF THE FEMUR

PAUL B. MAGNUSON, M.D.
CHICAGO

Probably no other common fracture has been so completely and consistently disabling as fracture of the neck of the femur, (1) because of the inability of bone to throw down sufficient callus to repair the fracture; (2) because most of the patients in whom the fracture occurs are in the latter part of adult life; (3) because it is apparently difficult to reduce the fracture and hold it in reduction; (4) because, owing to the age and weight of a great many of the patients, it is impossible at times to put on any fixation apparatus that is bearable. Therefore these fractures go to nonunion and deformity, with loss of carrying ability of the leg on the affected side and a serious and permanent disability which confines the patient to a limited area of activity.

Many operations have been advanced for the repair of these fractures. Murphy advocated the use of long spikes driven through the trochanter up into the neck of the femur after reduction. Later, an autogenous graft used in the same way was recommended by a number of surgeons, and, still later, Whitman and Brackett advanced operations that have not been sufficiently used. It seems incredible that one who is familiar with the pathology of old ununited fractures would choose to use a spike or autogenous bone graft as a spike to fasten the trochanter to the head through a mass of heavy fibrous tissue with the expectation of obtaining any considerable mechanical support. To begin with, the trochanter is pushed upward from three-fourths inch to 2 inches above the acetabulum; then there is more or less complete absorption of the neck so that the fixation appliance must bridge a considerable gap where there is no bone; the head is usually in a rotated position whereby the trochanter cannot be brought opposite the fractured surface; and, finally, after the displacement has occurred and contraction has taken place with the heavy fibrous tissue filling the gap between the trochanter and the head, it is impossible to pull the leg down far enough to bring the fractured surface on the trochanter and the fractured surface on

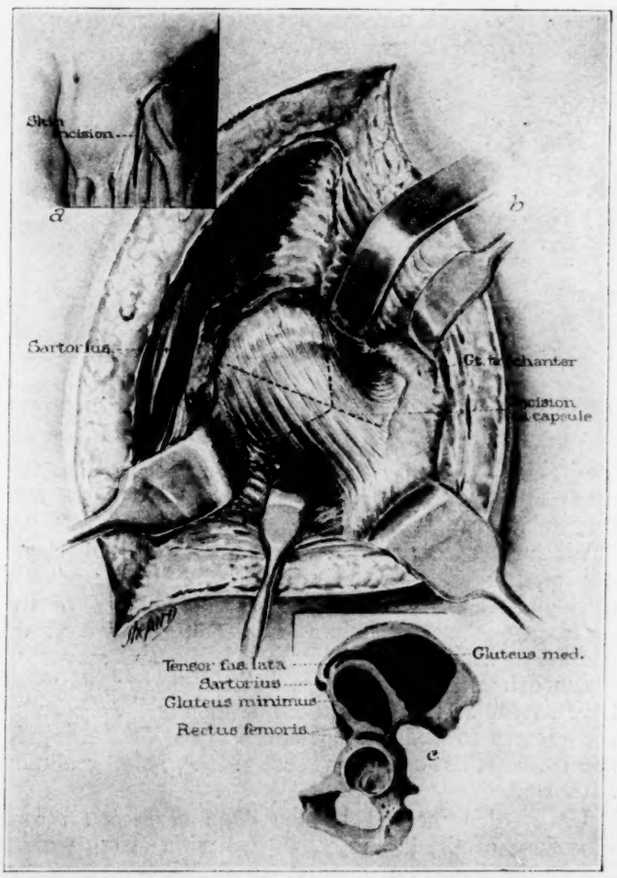

Fig. 1.—*a*, skin incision; *b*, exposure of joint capsule and lines of incision; *c*, origin of muscles around hip joint.

the head opposite each other, to say nothing of bringing them into apposition. The ends of the fragments are covered with hard, smooth, fibrous tissue which has reached complete maturity, and to expect bone to grow from either end of the fracture is to expect the impossible; one might as well place two surfaces of skin together and expect them to unite without first abrading the surface.

I have seen patients who have walked after such a nailing operation has been performed, but I have never seen anything in the roentgenogram following operation which would warrant the conclusion that there was a bridging by callus between the trochanter and the fractured surface of the head, and I believe that the patient's ability to walk occurs as the result of unusually heavy fibrous tissue formation between the trochanter

and the acetabulum, forming a fibrous support which will hold more or less weight, depending on its density and the area over which it extends. I have never seen normal motion after such an operation, and it seems quite impossible, considering the shallowness of the

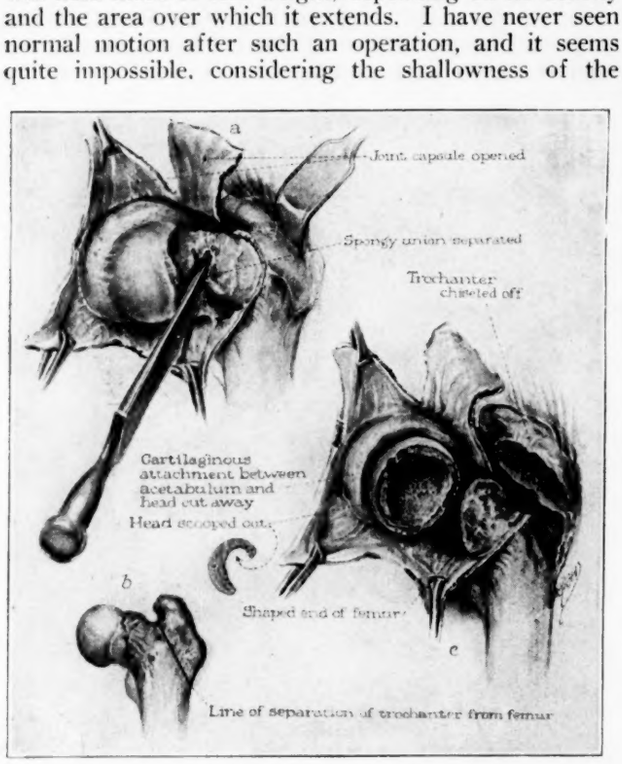

Fig. 2.—*a*, exposure of joint cavity and fibrous tissue; *b*, line of removal of trochanter; *c*, head and neck of femur shaped to fit each other.

head and the length of the gap to be bridged, plus the condition of the healed fractured surfaces, that any hope of a normal hip could be expected.

Whitman recommended removal of the head, clearing of the scar tissue between the head and the trochanter, and the fitting of a remolded end of the shaft into the acetabulum. Brackett advocated an operation which in most cases, I believe, serves to reestablish anatomic relations better than any which have so far been advanced. The results have been so satisfactory to both patient and surgeon that it would seem that this operation should be more generally advocated.

Under this method I have done seventeen reconstructions of the hip joint, always with an open mind before the operation, making the decision between the Brackett and the Whitman operation after the condition of the head has been thoroughly investigated, as this decision is influenced by several important factors which come to view when the hip joint is exposed.

The incision follows a Smith-Petersen exposure along the anterior margin of the ilium, curving downward and forward along the inner border of the sartorius muscle; the muscle is split and the inner attachment of the quadriceps is cut transversely close to its attachment (fig. 1 *a*). The capsule of the joint is exposed and the fibers of this are seen to run, instead of downward and outward, either straight outward at right angles to the long axis of the body or sloping a little bit upward and outward (fig. 1 *b*). The capsule is split from the acetabulum to the trochanter with a scalpel, then cut crosswise near the edge of the acetabulum, as far around toward the posterior surface as possible (fig. 1 *b*). This gives thorough exposure of the mass of fibrous tissue contained within the capsule, which bridges the gap between the fractured surface on the head and the fractured surface on the trochanter. At this point it will be noted that there is more neck than the roentgenogram had disclosed, but in this series of cases the head did not protrude beyond the outer rim of the acetabulum, except in small jagged irregularities.

The fibrous tissue connecting the head and the trochanter was removed with heavy, slightly curved, round-pointed scissors, and this was one of the most difficult parts of the operation (fig. 2 *a*). After removal of the fibrous tissue, in ten of the seventeen cases the head was found to be tightly adherent to the edge of the acetabulum around this fractured rim and with difficulty was completely freed (fig. 2 *c*). By rotating the head in the acetabulum, all surfaces could then be inspected easily. The hardness of the head was tested by pressure with the point of a 6 inch hemostat. The fractured surface was rather soft in each case, but this softness extended only from one-eighth to one-fourth inch into the head, at which point rather compact bony tissue was encountered. In three cases the cartilage was yellowish; in all others it was the normal color of healthy hyaline cartilage. After thorough examination, the head was allowed to assume its normal position in the acetabulum, which is controlled under these circumstances by the ligamentum teres, so that an estimation could be made of the point at which the main weight-bearing of the shaft would occur in the reconstructed hip.

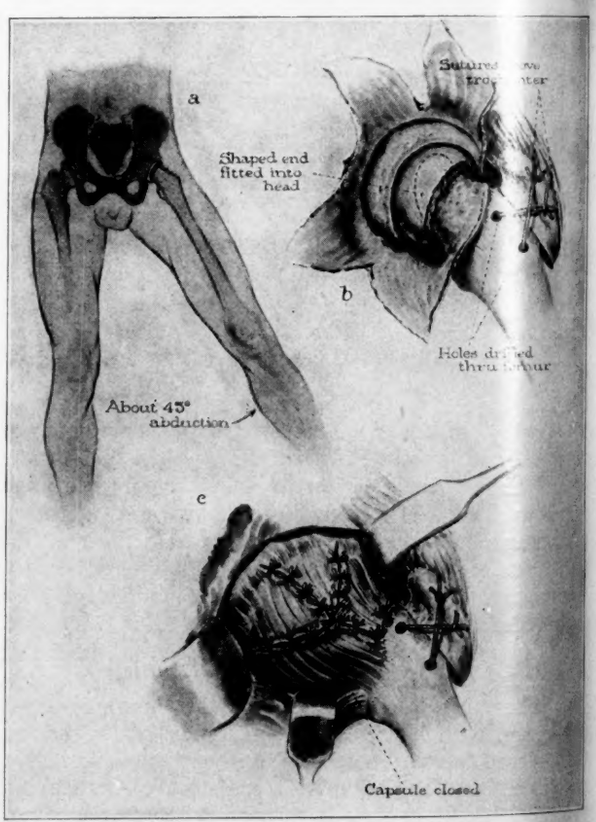

Fig. 3.—*a*, position in which leg is to be maintained after operation; *b*, normal relations of structures reestablished; *c*, completed operation.

With a large motor-driven burr the femoral head was hollowed out in the form of a truncated cone, the deepest portion of which was at the point where the greatest weight would fall with the patient in a standing position (fig. 2 *c*). This excavation was made down to

a point where the bone of the head underlay the cartilage rather closely, and in all cases the bone was firm and hard at this point. This stage of the operation having been completed satisfactorily, the trochanter with attached muscles was cut off at an angle estimated to be the original angle of the neck; that is, the line of incision through the trochanter sloped downward and outward (figs. 2 *b* and *c*). A wide, thin-bladed chisel was found to be the best instrument; it was more adaptable than a Gigli saw, and, as free lateral approach was not possible because of the incision, it proved to be a better guide to the angle at which the trochanter was being cut.

Fig. 4.—Woman, aged 49, operated on fifteen months after fracture because of nonunion; 1 inch shortening; no other disability. Appearance five years after operation.

This incision, at the upper end, was started exactly at the base of the neck of the femur, leaving intact whatever portion of the neck remained attached to the shaft; the upper end of the shaft with the remainder of the end of the neck, was then brought up into the incision and rounded off in the same curve which had been produced in hollowing out the head (fig. 2 *c*). It was found necessary in cases in which there was very little neck remaining to narrow the upper end of the shaft from front to back by removing the sharp edges left by the removal of the trochanter in order that it might not strike the edge of the acetabulum in flexion and extension. After the upper end of the shaft had been modeled to fit into the hollowed out head and had been narrowed by cutting away bone from the front and back edges of the shaft where the trochanter had been removed, a Murphy skid was placed against the upper rim of the acetabulum and over the upper end of the shaft, and the newly modeled neck was levered into its new position in the head. At the same time the leg was abducted, care being taken to rotate the shaft while abducting the leg so that the upper convex surface on the neck would fit into the concave surface cut to receive it in the head. In all cases in this series, the muscles originating on the pelvis and inserted in the femur and leg were sufficient to hold the end of the shaft snugly up into the acetabulum when the leg was held in about 45 degrees of abduction.

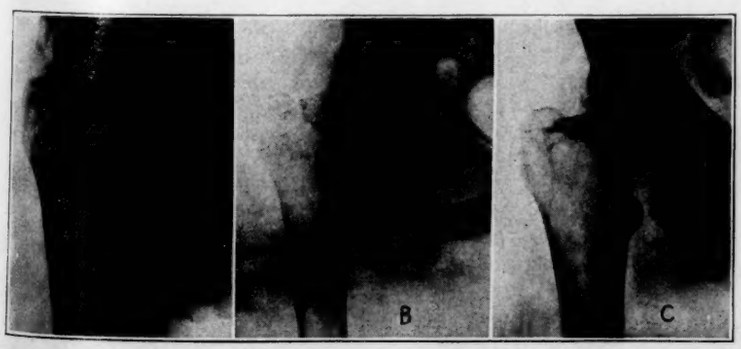

Fig. 5.—Fractured neck of femur in patient shown in figure 4: *A*, before operation; *B*, three months after operation; *C*, five years after operation. Note union and direct weight-bearing from shaft into head.

This accomplished, it was necessary to reattach the trochanter to the shaft of the femur. The trochanter has suffered, as has the rest of the bone, from atrophy of disuse and consequently is not a satisfactory area through which to pass the retaining sutures of malleable iron wire or silk used for fixation. Two holes were drilled through one side of the cortex of the upper end of the shaft and a suture inserted in each, which was brought out through the medullary cavity and carried up through the muscle attachments just at the tip of the trochanter (fig. 3 *b*). The trochanter was then pulled downward to come into a position below and lateral to its normal, the sharp, wedge-shaped lower end protruding beyond the shaft on the lower lateral border of the place from which it was removed.

Fig. 6.—Woman, aged 52, operated on three weeks after fracture as choice between Whitman closed method and open operation. Patient left hospital seventy-four days after operation, bearing weight. Three-fourths inch shortening two years after operation; no other disability; no limp. This is the only patient we have operated on for any cause other than nonunion.

The normal relations of the hip joint being practically reestablished, the muscle attachments were all in place and had a constant tendency to hold the upper end of the shaft firmly into the head (fig. 3 *c*). The head with its smooth hyaline cartilage moved freely in the acetabulum and followed the motions of the shaft of the femur because of the firmness with which the shaft was held against it, or actually reposing within it. In no instance was the patient placed in a cast, it being necessary only to hold both legs in 45 degrees of abduction, which can be done with a Ranney splint; in this way the discomfort resulting from fixation in a cast was avoided. The legs were flexed as much as 45 degrees. After two weeks of immobilization the patient was allowed to semirecline in bed and was given complete sponge baths.

During the first eight weeks of convalescence, two points that cannot be overemphasized are: (1) The legs must be maintained in at least 45 degrees of abduction; (2) the affected leg must be fixed continuously in a position of internal rotation. If these two positions are maintained, the hip can be moved

and the patient can be moved in bed. Such fixation is necessary for eight weeks only, at the end of which time the patient can be allowed up in a wheel-chair and on crutches. Weight-bearing can be started as soon as the patient is out of bed. Bony union is not necessary, because the upper end of the shaft and the head become firmly adherent in eight weeks, and, as weight-bearing tends to force the shaft further into the head, walking is advisable.

The surprising feature in this operation is that it seems to involve comparatively slight surgical shock. The youngest patient of this series was 47, the oldest 85 years of age. There were no deaths and no cases of serious postoperative shock. The results were uniformly satisfactory to the patient. The time between the date of fracture and operation varied from six months to seven years in all excepting one case (fig. 6). In only one case was it necessary at the time of operation to remove the head. This patient, the youngest in the series, had been disabled for seven years; the head was so degenerated that it was useless, and a Whitman operation was performed.

CONCLUSIONS

Because of the large mass of fibrous tissue present in this type of case, nailing and the usual form of autogenous graft fixation is unsatisfactory in most cases.

The fractured surface of the trochanter cannot be brought opposite the fractured surface of the neck because of the mass of fibrous tissue.

New bone will not form in hard, old scar tissue, and fractured surfaces covered with old fibrous tissue will not produce new bone.

It is necessary to remove the fibrous tissue between the head and the trochanter completely before new bone will form; this can be done only by opening the capsule.

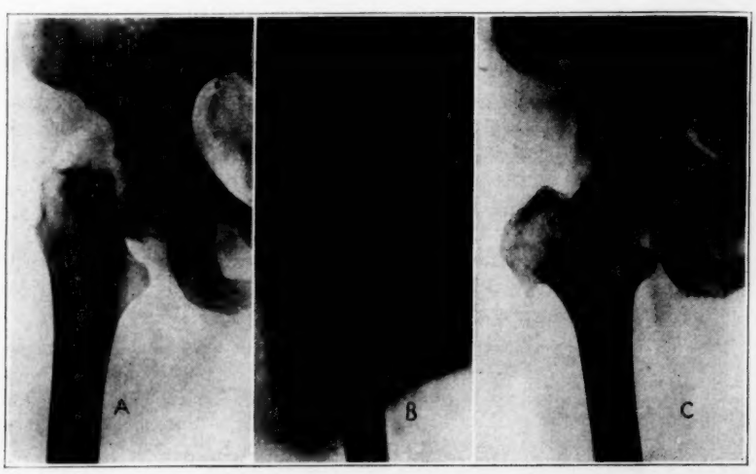

Fig. 7.—Fractured neck of femur in patient shown in figure 6: *A*, before operation; *B*, immediately after operation; *C*, two years after operation.

This operation reestablishes as nearly as possible normal anatomic relations, leaves the head covered with normal cartilage in contact with the normal cartilage of the acetabulum, and therefore results in a painless hip with much freer motion than can be obtained by any other method.

There is little surgical shock connected with the operation, and in patients of normal expectancy it can be performed without fear.

30 North Michigan Avenue.

ENCEPHALOGRAPHY UNDER NARCOSIS PRODUCED BY NONVOLATILE ANESTHETICS

A NOTE ON THE TECHNIC

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AND
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Our purpose in this paper is to discuss the use of nonvolatile anesthetics in the performance of encephalography or pneumorachicentesis. By these terms is understood the introduction of air through the lumbar puncture needle, displacing fluid in the ventricular and

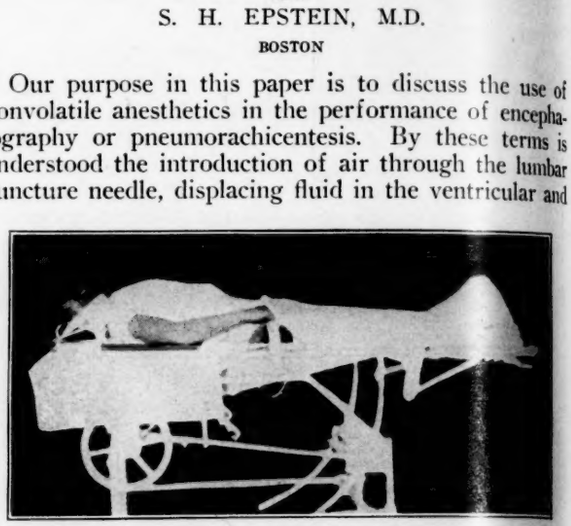

Fig.1.—Patient lying supine on the stretcher.

subarachnoid systems and subsequently the making of roentgenograms of the head. This is in contradistinction to the method of ventriculography, in which the skull is trephined and air is introduced directly into the ventricles.

Encephalography is largely replacing ventriculography because of the greater simplicity of the procedure, i. e., the necessity of trephining the skull being obviated. By many it is considered a somewhat less dangerous procedure, although about this there is considerable question.

The chief objection to encephalography is the great discomfort experienced by the patient, especially during the injection of the air. As a rule, after from 30 to 40 cc. of air has been injected, the patient complains of headache which grows more and more severe and which, from all appearances, is quite extreme. At about this time marked sweating occurs and the pulse becomes slow, dropping to 60, 50 and occasionally even as low as 40 beats a minute, and at the same time the quality becomes rather poor. As the injection of air continues, vomiting of the projectile type frequently occurs. As the amount of air required to give adequate roentgenograms is from 100 to 200 cc., and as this must be injected moderately slowly, it takes from fifteen minutes to half an hour to carry out the procedure. This is, of course, a long period of suffering for a patient unless alleviated by some means. It is also a difficult period for the operator. At times the procedure has to be stopped before the required amount of air is injected because of collapse or near collapse of the patient. Following the encephalography, headache usually continues for a number of hours and not infrequently for a day or two.

From the Boston Psychopathic Hospital.

Because of these reactions, various measures have been utilized, tending to mitigate the severity of the reaction and to make the procedure less disturbing. Morphine and scopolamine are used frequently; while these drugs greatly diminish the discomfort, they by no means entirely overcome it, and there are obvious disadvantages of using these drugs in the high dosage that is necessary to give reasonable relief. Volatile anesthetics, especially ether, have been satisfactorily employed. There are, however, several disadvantages to them; namely, the possibility of pulmonary complication, the marked increase in intracranial pressure which is a contraindication in cases of pathologically increased intracranial pressure, the unpleasant after-effects of the anesthesia, and the need of an anesthetist. Hence we have turned to the use of nonvolatile anesthetics such as sodium ethyl (1-methyl-butyl) barbiturate (pentobarbital-sodium), sodium isoamyl-ethyl barbiturate (amytal), and avertin. These drugs have the advantage of a quickly induced anesthesia with no markedly unpleasant after-effects, no rise in intracranial pressure, a fairly prolonged analgesic effect after the anesthesia has worn off, ease of administration, and relative safety.

Our experience has been obtained chiefly with pentobarbital-sodium. However, we believe that what can be said about the use of this drug is equally true of sodium isoamylethyl barbiturate, as we have used the latter preparation for anesthesia for other purposes, and the clinical and physiologic results are very similar.

Our procedure is to give an intravenous injection of from 0.3 to 0.5 Gm. (from 5 to 7½ grains) of pentobarbital-sodium dissolved in from 10 to 15 cc. of distilled water. The solution is injected slowly, from three to five minutes being taken for the injection. The patient is usually in a state of narcosis by the time the injection is completed. Occasionally a subcutaneous injection of 0.16 Gm. of morphine sulphate is given fifteen minutes before the pentobarbital-sodium. The narcosis obtained is quite profound. The deep reflexes are abolished, as are the skin and gag reflexes. This state of areflexia and complete anesthesia is obtained in from ten to twenty minutes after the injection, and the patient is then ready for the encephalographic procedure.

As the patient is in a state of muscular relaxation, it is convenient to have an apparatus that will hold him in position for the air injection. It is quite practical to get along without any special apparatus by placing the patient on a stool, allowing the body to rest on a padded table with support given on either side by a nurse, attention being given to the support of the head. However, we have found it more convenient and practical to use the apparatus to be described.[1]

This apparatus consists of a jointed stretcher which may be placed on the operating table; the anesthetic is administered while the patient is lying supine on the stretcher (fig. 1). About midway along each side of the frame there is a joint with a semicircular disk containing a number of holes into which pins may be placed. In this way various angles of the sitting position may be obtained (fig. 2). The patient is held in place by a head sling, two shoulder straps hung from the top of the frame, and an abdominal strap fastened to the sides (fig. 3).

Fig. 2.—Patient in sitting position, held by sling, shoulder and abdominal straps.

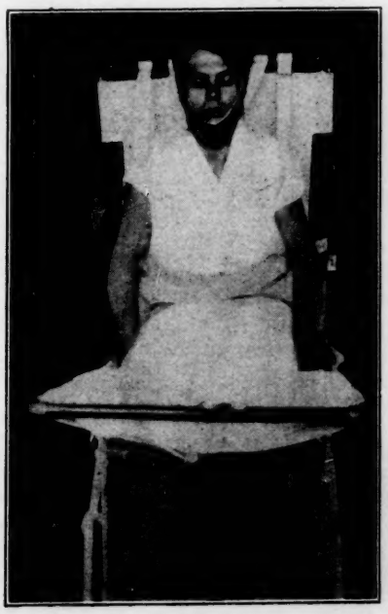

Fig. 3.—Front view of chair.

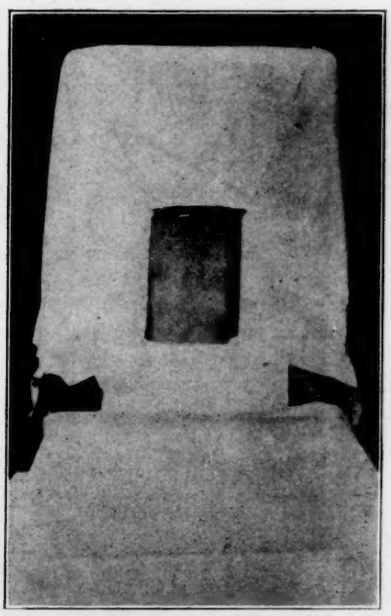

Fig. 4.—Back view of chair, showing opening for lumbar puncture.

The lumbar puncture and the air injection are made with the patient in an upright position through a rectangular opening in the canvas which forms the back of the apparatus (fig. 4).

In order to get the best filling of both the subarachnoid space of the head and the ventricles, it is necessary to be able to shift the position of the patient from time to time. Thus, with the head and trunk in an erect position, the best filling of the ventricles is obtained, whereas with the head and trunk bent forward or backward, the subarachnoid spaces are more readily filled. It is also advisable to move the head from side to side and backward and forward at the neck. These changes of posture are easily produced with this apparatus. The head sling allows for easy movement of the head by an assistant, and the angle of the back-rest is readily changed.

1. This table was designed for use in encephalography under anesthesia by Drs. S. H. Epstein and S. S. Hanflig.

When the air injection has been completed, the patient may be wheeled to the x-ray apparatus either sitting upright or recumbent, and the pictures may be taken in the vertical or the horizontal position as thought best by the roentgenologist.

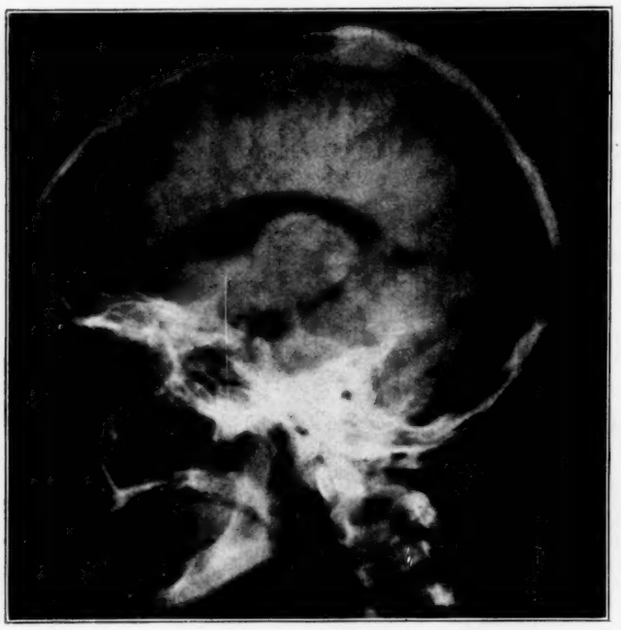

Fig. 5.—Lateral view showing a normal encephalogram.

As already mentioned, the air injection usually takes from fifteen to thirty minutes. During this period the patient is completely anesthetic, the operator is not disturbed by complaints from the patient, and the injection is not interrupted, nausea and vomiting do not occur, and there is practically no diaphoresis. The roentgenograms are made with the patient in a state of anesthesia which enables one to put the head in any desired position; no vomiting occurs, as is frequently the case when an air injection is performed without anesthesia, and thus the roentgenologist has no interference with his technic from the patient. In dealing with psychotic, disturbed or fearful patients, this is of especial advantage.

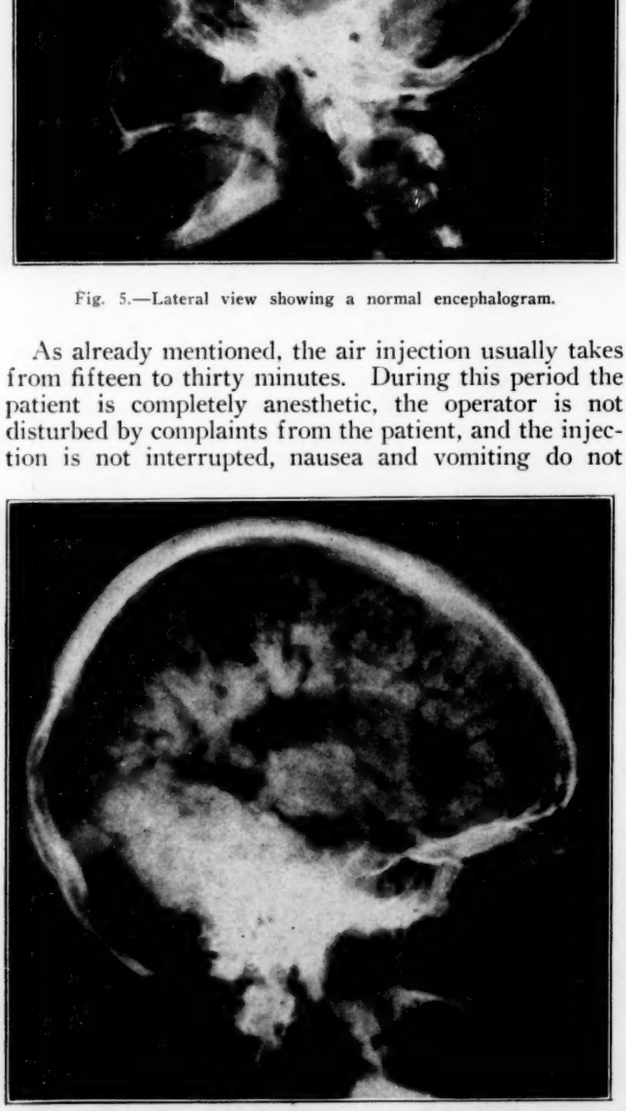

Fig. 6.—Lateral view showing extensive cortical atrophy and enlargement of the lateral ventricles.

The narcosis gradually wears off in the course of from four to six hours. On awakening, the patient rarely has a complaint and usually is able to take nourishment. There are, as a rule, no headache, no gastro-intestinal symptoms, and no fever. Headache frequently does occur some hours later, but at this time it is rarely very severe and is easily controlled by a moderate dose of some opiate.

With avertin anesthesia, the conditions are very similar both as to the condition while the air is being introduced and as to the after-effects.

We have encountered no special contraindications to the use of pentobarbital-sodium anesthesia in cases selected for encephalography. We have employed this drug in twenty instances, mainly in cases with symptoms of intracranial pathologic conditions other than those of tumor. Figures 5 and 6 show the roentgenographic results of the technic as described in this paper with pentobarbital-sodium anesthesia.

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ROENTGEN VISUALIZATION OF LYMPH NODES IN ANIMALS

PRELIMINARY REPORT

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As is well known, the lymphatics will absorb particulate substances, and also materials insoluble in water, whereas the blood capillaries are principally concerned with the absorption of materials soluble in water. This knowledge has resulted in much interesting experimental work bearing on the subcutaneous injections of certain insoluble materials which were found to have been taken up by the lymph vessels and carried to the lymph nodes. Many investigators have reported certain experimental results obtained by injecting insoluble substances, such as carbon and carmine, into the subcutaneous tissues of the legs of animals. They have been able to prove, by recovering them in the lymph nodes, that the lymphatic system absorbed these substances. While such results are interesting and important, we are unable to find experimental use of the roentgen ray in the living animal to visualize foreign opaque particles in lymph nodes. The collection of iodized poppy-seed oil in the lymph spaces of the neck and head was observed by Pfahler[1] one year after the injection of the antrums by this opaque medium for the purpose of studying the sinuses. He was of the opinion that his case was the first roentgen demonstration of the lymph spaces. He was unable, however, to demonstrate the lymph glands or nodes. Our review of the literature would indicate that this presentation of experimental work on the visualization of lymph nodules of animals is the first roentgen demonstration of this important unit of the lymphatic system.

While conducting certain experimental work on animals by injecting thorium dioxide into the tail veins

Aided by a grant from the David Trautman-Schwartz Research Fund.
From the Department of Medicine, Division of Radiology, Tulane University of Louisiana School of Medicine.

1. Pfahler, G. E.: A Demonstration of the Lymphatic Drainage from the Maxillary Sinuses, Am. J. Roentgenol. **27**: 352-356 (March) 1932.

of rats, visualizing the liver, spleen and kidney with their vessels, we were unsuccessful in several instances in injecting the material into the vein. This was particularly true in the tail vein of rats, and in these instances a small amount of the thorium dioxide was injected into the tissues surrounding the blood vessels. In such instances it was observed at a later time that a roentgenogram disclosed the lymph nodes clearly visualized.

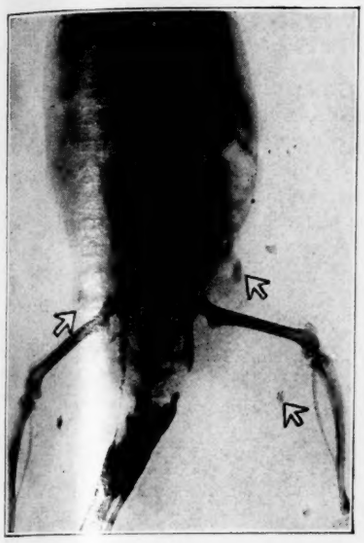

Fig. 1.—The popliteal and inguinal nodes and also a vessel leading from the tail of the rat to one of the lymph nodes.

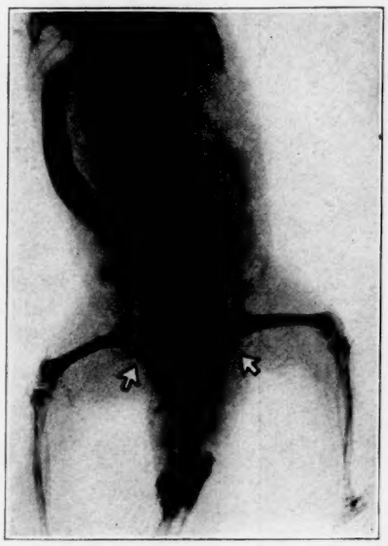

Fig. 2.—Visualization of inguinal lymph nodes with vessels. This rat was previously injected intravenously to visualize the liver and spleen. The inguinal lymph nodes were visualized, however, by subcutaneous injection with thorium dioxide.

The following experiments were conducted on the white rat and the dog to ascertain whether lymph nodes could be visualized in every instance and in different locations. Twelve white rats and one dog were used in these experiments. They were all injected with 0.1 to 0.25 cc. of thorium dioxide in the tail and legs, as near blood vessels as possible without introducing the material into them. These areas were chosen because of the prevalence of perivascular lymph spaces. It was found that visualization was produced more rapidly from this vicinity than when injections were made in other less vascular areas. Roentgenograms were made of each animal every twelve hours, and in every instance the lymph nodes were visualized in the region near the injections in from one to three days. These visualizations include popliteal (fig. 1), inguinal (fig. 2), axillary (fig. 3), and mesenteric (fig. 4) glands. Among the rats used, two were pregnant, and in both instances the lymph nodes were visualized much earlier and with greater density than in the nonpregnant rats. These subcutaneous injections of thorium dioxide have never produced any slough, abscesses or harmful effects. It is now more than two months since some of the animals were injected, and the thorium is still visible at the site of injection.

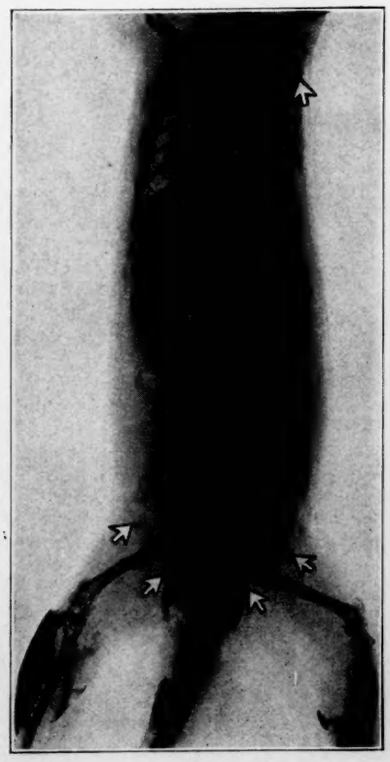

Fig. 3.—Visualized lymph node in the axillary space.

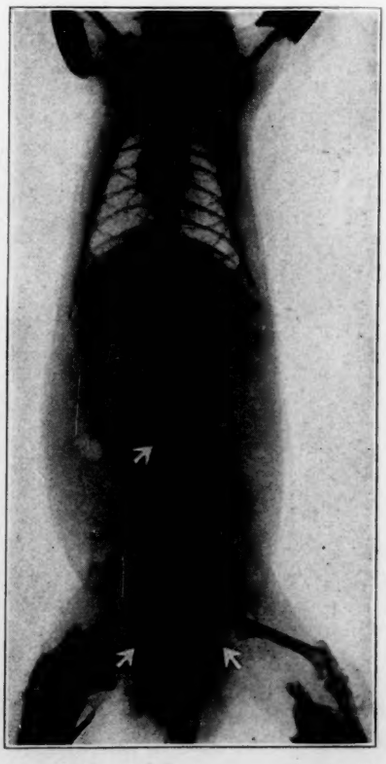

Fig. 4.—Visualization of the mesenteric lymph node and also inguinal lymph node.

In order to be certain that the objects demonstrated on the roentgenograms were lymph nodes, we removed several of the lymph nodes and examined them by means of the roentgen ray. The marked density of these nodules left no doubt in our minds that they were impregnated with thorium. In the instances wherein we used a dog, injected in the same manner as the rats, a similar visualization of the inguinal lymph nodes was apparent (fig. 5). We removed these (fig. 6), and a histologic examination by Dr. W. H. Harris of the Department of Pathology, Tulane University of Louisiana School of Medicine, showed conclusively that the lymph nodes had absorbed a large quantity of thorium.

We are at present conducting similar observations on man and our encouraging results indicate that an early report on this subject will follow. Other experimental work is now under way in which the visualized lymph nodes are being studied to ascertain whether or not the radioactivity of thorium alone is sufficient to produce biologic changes; also whether the characteristic rays of thorium, when hard roentgen rays are applied to it, will be a factor in producing changes in the tissues of lymph nodes. If this can be shown to be the case, it will serve to stimulate investigation as to the greater effect that radiation therapy might have on malignant nodules impregnated with thorium. We are at present beginning such a study, to be reported later.

The visualization of lymph nodes has two outstanding possibilities; namely, diagnostic and therapeutic. From a diagnostic standpoint, it can be appreciated that

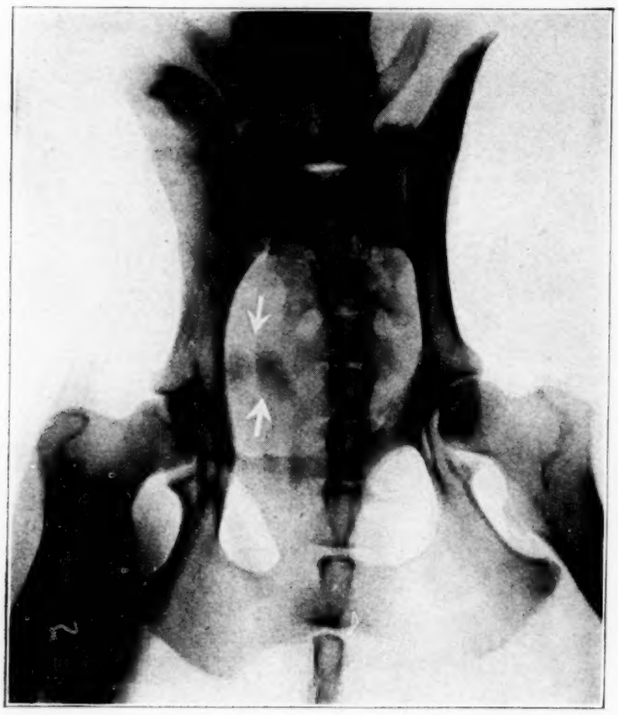

Fig. 5.—Visualized inguinal lymph nodes of a dog.

the possible visualization of lymph nodes in man could be of invaluable assistance to the surgeon in locating metastatic nodules before and after operation. From the therapeutic point of view, because lymph nodes

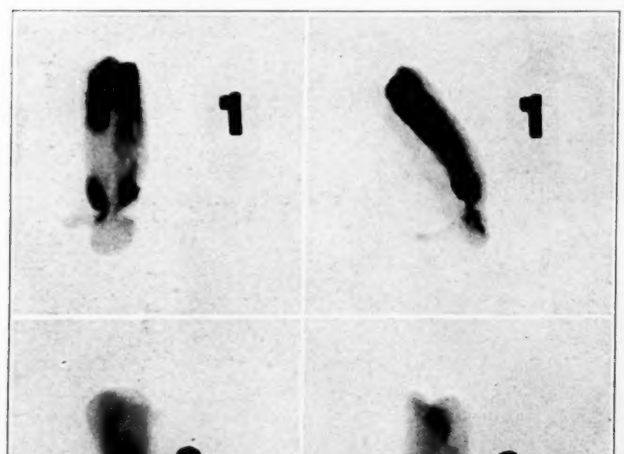

Fig. 6.—Same nodes as in figure 5, removed.

absorb the metal thorium, which is radioactive and emits characteristic rays, it is possible that the efficacy of radiation therapy in cancer may in the future be greatly enhanced.

921 Canal Street.

SKIN ERUPTIONS FROM BISMUTH THERAPY IN SYPHILIS

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With the increasing use of bismuth compounds in the treatment of syphilis, various skin eruptions due to the drug have been observed. A few examples are recorded in the American literature and a larger number are reported by foreign writers.

Among the acute types of eruptions described are the erythrodermatous and exfoliative,[1] scarlatiniform,[2] hemorrhagic,[3] urticarial [4] and those resembling erythema multiforme.[5] Both Lehner [6] and Boas [1] have reported herpes zoster at the site of a bismuth injection.

The chronic forms observed were the eczematous and maculosquamous.[7]

During the past three years, approximately 25,000 intramuscular bismuth injections have been given at the Central Free Dispensary of Rush Medical College. Twenty-two cases of bismuth eruption occurred during this time. The diagnosis was established in most of the patients by (1) development of the eruption during the administration of bismuth; (2) subsidence of the rash on discontinuing the drug; (3) recurrence of the lesions on readministering bismuth.

The first case to be recognized is reported here in full, because the diagnosis was not established until after the appearance in the same patient of eruptions resembling three common skin disorders.

From the Department of Dermatology, Rush Medical College.

1. Sézary, A., and Benoist, J.: Erythrodermie grave après une seule injection d'iodo-bismuthate de quinine, Bull. Soc. franç. de dermat. et syph. **34:** 419 (June) 1927. Voigt and Görl: Ueber toxische Hauterscheinungen nach Wismutbehandlung, München. med. Wchnschr. **71:** 904 (July 4) 1924. Froment, J., and Gaté, J.: Un cas d'érythrodermie bismuthique tardive avec lésions hyperkératosiques et fissuraires des régions palmaires et plantaires, Lyon méd. **139:** 600 (May 22) 1927. Pinard, M.; Weil, M. P., and Louvel, R.: Un cas de dermatite exfoliatrice d'origine bismuthique, Bull. et mém. Soc. méd. d. hôp. de Paris **48:** 660 (May 9) 1924. Lortat-Jacob, L., and Roberti, J.: Les érythrodermies bismuthiques, Médecine **8:** 147 (Nov.) 1926. Gaté, J., and Gardère, Henri: Accidents bismuthiques multiples, Lyon méd. **140:** 109 (July 31) 1927. Kerl, W.: Ueber Hautschädingung nach Bismogenolbehandlung, Wien. med. Wchnschr. **75:** 352, 1925. Pinard and Marassi: Dermatite exfoliatrice aprés injection bismuthique, Bull. et mém. Soc. méd. d. hôp. de Paris **46:** 1434 (Nov. 3) 1922. Galliot, A.: Trois cas d'érythème bismuthique, Bull. Soc. franç. de dermat. et syph. **30:** 203, 1923. Gastou and Pontoizeau: Un cas d'érythrodermie bismuthique, Bull. Soc. franç. de dermat. et syph. **29:** 382, 1922. Hudelo, L., and Rabut, R.: Incidents et accidents de la bismuthothérapie, Presse méd. **32:** 312 (April 9) 1924. Boas, K.: Ueber toxische Hauterscheinungen im Verlaufe der Wismutbehandlung der Syphilis, Med. Klinik **20:** 1533 (Nov. 2); cont'd 1571 (Nov. 9) 1924.

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3. Hudelo and Rabut (footnote 1). Heimburger, L. F.: Severe Bismuth Poisoning, China M. J. **40:** 842 (Sept.) 1926. Sternberg, A.: Ueber eine Wismutschädingung der Haut, Arch. f. Dermat. u. Syph. **148:** 28, 1924.

4. Galliot (footnote 1). Hudelo and Rabut (footnote 1). Grund (footnote 2). Helfer, Adolf: Zwei Fälle von urtikariellem Mesurolexanthem, Dermat. Wchnschr. **83:** 1358 (Sept. 11) 1926. Gougerot, H., and Peyre, E.: Anaphylaxie et sensibilisation au bismuth, Ann. d. mal. vén. **22:** 181 (July) 1927. Bueler, F. A.: Wismutschädigungen, Zentralbl. f. Haut- u. Geschlechtskr. **14:** 281, 1924-1925. Fouquet, C., and Machton: Manifestations cutanées au cours des traitments par le bismuth seul ou associé au mercure, Bull. Soc. franç. de dermat. et syph. **32:** 289, 1925. Lepinay, E.: Urticaire provoquée par des injections de sel de bismuth, Bull. Soc. franç. de dermat. et syph. **30:** 150, 1923.

5. Hudelo and Rabut (footnote 1). Gabriel (footnote 2). Müller, H.: Wismutbehandlung der syphilis, Zentralbl. f. Haut- u. Geschlechtskr. **7:** 289.

6. Lehner, E.: Toxisches Erythem und Herpes Zoster nach intramuskulärer Bismutinjektion, Dermat. Wchnschr. **77:** 1107, 1923.

7. Gastou and Pontoizeau (footnote 1). Hudelo and Rabut (footnote 1). Grund (footnote 2). Gougerot and Peyre (footnote 4). Fouquet and Machton (footnote 4). Holzamer, H., and Schultze-Heubach, H.: Ein Fall von Hartnäckigem, fast universellem Wismutexanthem mit folgender Neurodermisierung (Lichenifikation), Klin. Wchnschr. **4:** 1448 (July 23) 1925. Mulot, O. L.: Bismuth Skin Manifestations in Cases of Syphilis, M. J. & Rec. **126:** 103 (July 20) 1929.

CASE 1.—A Jewess, aged 35, with latent syphilis, received sixteen weekly injections of potassium bismuth tartrate in oil with no untoward reaction to the drug. Six neoarsphenamine treatments, followed by eighteen injections of water soluble bismuth sodium tartrate, were given. After the sixteenth bismuth treatment, she presented numerous coin-sized, oval, fawn-colored, scaling macules which followed the cleavage planes of the skin on the neck, trunk, arms and thighs. This was pruritic and was considered to be pityriasis rosea.

Fig. 1 (case 1).—Patches of lichenified dermatitis and pigmented relics of old lesions on the chest and neck during the third attack of bismuth dermatitis.

Marked improvement in the lesions occurred during six weeks' rest and six subsequent neoarsphenamine treatments. Three weekly potassium bismuth tartrate injections were followed by the appearance of generalized, papular, lichenoid patches, from 0.5 to 3 cm. in diameter. Many of the lesions were pigmented. A diagnosis of lichen planus was considered; but under a presumptive diagnosis of a lichenoid neoarsphenamine rash, bismuth was discontinued and fifteen daily intravenous treatments of 1 Gm. of sodium thiosulphate were given. Because of only slight improvement, a diagnosis of lichen planus was made and mercuric chloride administered intragluteally for three months. The lichen planus-like patches disappeared, leaving pigmented relics.

After a rest, neoarsphenamine was given guardedly without mishap for a total of ten injections. It was then felt certain that she was not sensitive to this drug, but possibly to bismuth. After fourteen weekly bismuth treatments new lesions appeared in the pigmented relics of many of the old patches (fig. 1). These were fewer, larger, and of an acute eczematous nature with lichenification supervening. It was now decided that this and all previous eruptions had been caused by bismuth. She slowly recovered under intravenous sodium thiosulphate therapy. A test injection of bismuth caused a reactivation of some of the eczematoid lesions.

The patient's general health remained good throughout the entire period of observation. Urinalyses were invariably negative. A biopsy (fig. 2), done at the time of the lichen planus-like eruption, showed a nonspecific type of inflammatory reaction, with collections of small round cells immediately under the epidermis and about the blood vessels of the cutis.

There were thirteen patients, seven of whom were Negroes, who presented acute, erythematous, scaling, oval patches, following the cleavage planes of the skin and simulating the lesions of pityriasis rosea. Of these, seven were proved to be due to bismuth by withdrawal of the drug, administration of sodium thiosulphate, and recurrence of the lesions on the readministering of bismuth.[8] The following history is typical of this type of bismuth eruption.

CASE 2.—A white man, aged 31, with secondary syphilis, received ten neoarsphenamine and fifteen potassium bismuth tartrate injections, and a course of mercury rubs. Then, six neoarsphenamine and five bismuth treatments were given, when a mildly pruritic, pityriasis rosea-like exanthem appeared over the thorax and the arms (fig. 3). This eruption practically disappeared after four intravenous treatments of sodium thiosulphate, and promptly reappeared at the old sites following two injections of bismuth. The eruption again cleared and reappeared in an aggravated form following five treatments of bismuth salicylate in oil. This patient had three attacks of bismuth dermatitis, provoked by two different preparations of bismuth in oil.

In several instances, this acute type of pityriasis rosea-like rash became chronic and lichenified, as the result of scratching. However, all cleared up as soon as the bismuth depots in the body had been eliminated. Soothing, oily lotions were the only local medication used in these cases.

In several instances, in which the patient was intolerant to mercury or the eruption mild, bismuth was given cautiously as the only intramuscular medication. In some, a mild dermatitis persisted throughout bismuth therapy. In others, gradual desensitization to the drug and complete disappearance of the rash occurred during treatment. Case 3 is illustrative of this desensitization:

CASE 3.—A Negro, aged 40, with secondary syphilis, developed an acute, patchy, erythematosquamous rash, scattered sparsely over the arms, chest, abdomen, thighs and legs, following the first course of neoarsphenamine and bismuth. The rash subsided during a rest and a course of neoarsphenamine. After the fourth injection in a new series of bismuth treatments, he developed a slight stomatitis and an exacerbation of a moderate number of the old lesions. A severe mercurial stomatitis and diarrhea occurred on three separate occasions when mercury was substituted for bismuth. For this reason, bismuth was used thereafter, in spite of the known bismuth sensitivity. The lesions persisted in a lichenified form during a twelve weeks' course of bismuth.

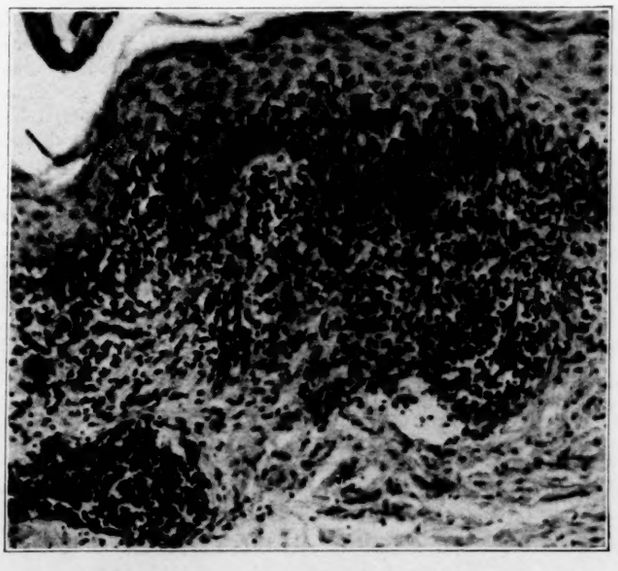

Fig. 2 (case 1).—Section taken at biopsy during the second attack of dermatitis, which shows the nonspecific character of the inflammatory infiltrate of a papule.

After a rest and a neoarsphenamine course, the skin was normal, excepting for pigmented relics of the patches. Follow-

8. Since this paper was accepted for publication, two more of the pityriasis rosea-like eruptions have been proved by our three criteria to be due to sensitivity to bismuth.

ing the twelfth bismuth treatment in this course, a mild lichenified recurrence appeared with no accompanying stomatitis. Later, a fourth course of bismuth produced no skin reaction whatever. While this patient was becoming desensitized, there was no change in the kind of drug used.

In one case the patient had an erythematosquamous eruption with acute urticaria preceding it. This was

Fig. 3 (case 2).—Acute pityriasis rosea-like, oval, scaling patches on the anterolateral chest wall.

the only urticarial reaction from bismuth in our series and was identical with a case reported by Courcous and Boutelier.[9]

CASE 4.—A young adult Negro with secondary syphilis received a course of neoarsphenamine and three injections of potassium bismuth tartrate, when an eruption appeared on the thorax and the abdomen. He did not report this until immediately after receiving the fifth bismuth treatment. At this time, he had maculosquamous lesions interspersed with acute, urticarial wheals, about 18 mm. in diameter, on the lateral and anterior aspects of the trunk. He stated that the wheals appeared first and developed into a scaling patch. Twenty-four hours later, many new wheals, severe nausea, and a moderate jaundice had appeared. Urinalysis was negative for sugar and albumin. Sodium thiosulphate cleared up the condition, after which he disappeared from observation.

In cases 5 to 14, inclusive, relatively mild erythematosquamous eruptions of a pityriasis rosea-like type were present. Of these, five proved to be bismuth sensitive according to the three criteria previously outlined. The diagnosis in the other cases was made from the occurrence of the distinctive rash during bismuth therapy. Except for one case of moderate stomatitis, there was no evidence of injury to the body associated with the dermatitis from bismuth in cases 5 to 14.

One instance of a lichen planus-like bismuth eruption appeared in the following case:

CASE 15.—A white man, aged 30, with latent syphilis developed, during bismuth therapy, an eruption on the flexor aspects of the forearms and wrists. It consisted of small, polygonal, violaceous, flat-topped papules, indistinguishable from lichen planus. The patient had three different attacks of this dermatitis while receiving bismuth, the first clearing up with mercury therapy under a mistaken diagnosis of lichen planus. The second was recognized as a bismuth exanthem, disappearing with the use of sodium thiosulphate. The third attack was deliberately precipitated as a test.

In patients 16 and 17, one, a Negress, and the other, a white woman, a pruritic, generalized, fine, horny, folliculopapular eruption appeared. In the Negress, the eruption was so benign that two courses of bismuth were given, even though the rash persisted throughout treatment. In the white woman, the eruption tended to become more severe and exfoliative, precluding the use of bismuth. This was the second case in the series caused by bismuth salicylate. It was the only case of exfoliative dermatitis in our group, in contrast to the great number of these reported in the literature.

Patients 18 to 22 inclusive, two of whom were Negroes, developed a lichenified dermatitis, simulating lichen simplex chronicus, during treatment with bismuth. As in the previous cases, the patches subsided during rest periods and reappeared on subsequent therapy with bismuth. The patches were not very numerous and appeared on the neck, forearms and legs as pruritic, oval, pigmented, lichenified lesions up to the size of a palm (fig. 5). When seen early in their evolution, these patches presented vesicles with oozing and crusting. Three patients of this group never received neoarsphenamine from us. Two of the cases proved to be bismuth eruptions by fulfilling the criteria previously outlined.

COMMENT

In all the cases here reported, the eruptions that developed as a manifestation of bismuth sensitivity had

Fig. 4.—Same type of eruption as in case 3 on the skin of a Negress.

never previously appeared in these patients. The exanthems occurred during the administration of bismuth and ceased after the withdrawal of the drug, though some of the common skin disorders which they simulated are notably refractory to therapy. Since the eruptions in this series were so benign and resembled some of the usual skin diseases, we felt justified in

9. Courcous and Boutelier, A.: Eruption pigmentée survenue au cours d'un traitement arsenico-bismuthique, Bull. Soc. franç. de dermat. et syph. **31**: 59, 1924.

reproducing the condition a second or even a third time to prove the etiologic rôle of the bismuth. Thirteen of the cases were tested and proved in this fashion.

The mildness of the eruption is best illustrated by those cases in which the use of bismuth was continued

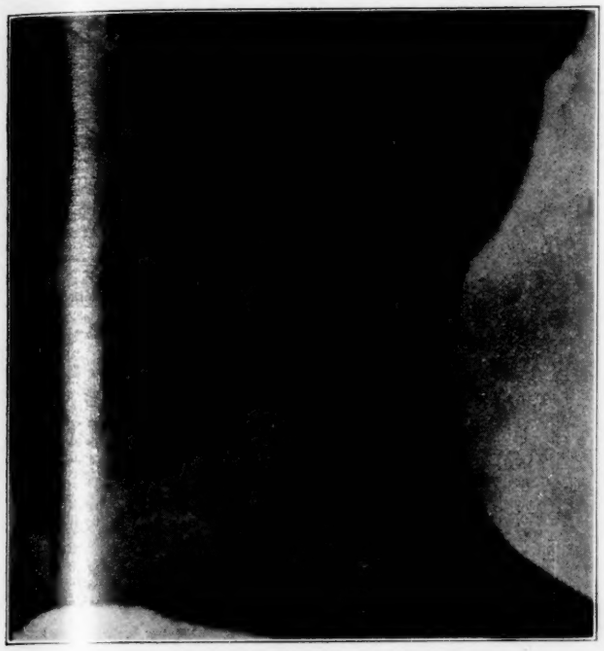

Fig. 5 (Case 18).—Lichen simplex chronicus-like bismuth dermatitis on the neck.

in spite of the sensitivity, some of these patients gradually becoming desensitized. In contrast to these cases, there are reports in the literature of cases comparable in severity to those of arsphenamine dermatitis.

The acute types of rash produced were the urticarial, folliculopapular, exfoliative, and the erythematosquamous, which resembled pityriasis rosea. The chronic types were the lichen planus-like and the chronic lichenified form, simulating lichen simplex chronicus. By far the greater number, fourteen, were in the pityriasis rosea-like group.

The incidence of skin reactions was approximately 1 in 1,140 bismuth treatments. Of the twenty-two cases reported, ten were in the Negro race, which is a much higher incidence than in the white race, considering the relative attendance of the two in the syphilis clinic. Reactions occurred with all the preparations used, which were an oil suspension of potassium bismuth tartrate, an aqueous solution of bismuth sodium tartrate, and an oil suspension of bismuth salicylate. The eruption was reproduced in several instances by a different preparation of bismuth, indicating that the sensitization was to bismuth alone.

These reactions developed in patients undergoing treatment for all stages of syphilis. In no case was there sensitivity to neoarsphenamine, although one man showed a marked sensitivity to mercury. Other than the skin lesions there were no subjective or objective manifestations attributable to the bismuth, except in two cases with moderate stomatitis and in another case with severe nausea and icterus. No serologic change attributable to the nonspecific action of the eruptions (esophylaxis) was found after their healing.

55 East Washington Street—25 East Washington Street.

NONRACHITIC CUPPING OF LONG BONES IN THE NEW-BORN

A ROENTGENOLOGIC AND CLINICOPATHOLOGIC STUDY

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ARDMORE, PA.

The possible existence of congenital rickets and its recognition have been much discussed. The problem has been approached from both the roentgenologic and the histologic angles, but little attempt has been made to correlate the observations of one with the other. Ylppö,[1] in a roentgenographic investigation of eighty-eight premature infants, believed that evidence of rickets was present in the long bones of five. Hess and Weinstock,[2] in a similar study of 250 new-born infants, found fraying with a tendency to cupping in the ulnas in a few instances, but they were unable to find a frank case of congenital rickets. Histologic studies

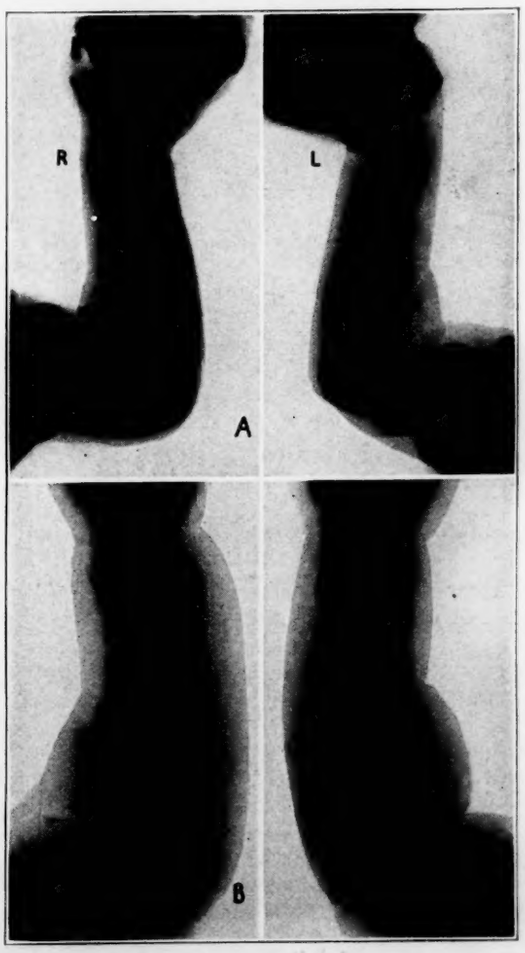

Fig. 1.—*A*, cupping of ulnas of baby 2 shortly after birth; *B*, characteristic rachitic changes of radius and ulna in same infant at 13 weeks of age.

carried out by Schmorl[3] on a series of over 100 full term and premature infants failed to show evidence

From the x-ray and obstetric departments of the Jefferson Hospital.

1. Ylppö, A.: Das Wachstum der Fruehgeborenen von der Geburt bis zum Schulalter, Ztschr. f. Kinderh. **24**: 111, 1919.
2. Hess, A. F., and Weinstock, Mildred: A Comparison of the Evolution of Carpal Centers in White and Negro New-Born Infants, Am. J. Dis. Child. **29**: 347 (March) 1925.
3. Schmorl, G.: Die pathologische Anatomie der rachitischen Knochenerkrankung, Ergeb. d. inn. Med. u. Kinderh. **4**: 403, 1909.

of rickets. Hess [4] cites the earlier histologic work of Pommer [5] in which the observations were identical with those of Schmorl.

Alterations in the diaphyso-epiphyseal line due to rickets are reflected in roentgenograms. The characteristic saucer-shaped deformity and jagged irregularity of the end of the diaphyses are universally recognized.

Fig. 2.—*A*, cupping of ulnas of baby 5, shortly after birth; *B*, characteristic rachitic changes of radius and ulna in same infant at 13 weeks of age.

In an attempt to find patients suitable for use as controls in a study of antirachitic agents, we made roentgenograms of the long bones of forty-two infants ranging in age from 3 to 28 weeks. Two infants, aged 4 weeks, and two, aged 5 weeks, showed cupping. We thought that this deformity might be rachitic.

To determine the earliest age at which cupping could be found roentgenographically we roentgenographed a group of Negro infants born during the months of February, March and April. We chose Negro infants because of the high incidence of clinical rickets in children of this race. Theoretically, the material was eminently suitable for the development of congenital rickets; the majority of the mothers came from unhygienic homes, lived on diets poor in vitamin D and received very little sunshine during the latter months of pregnancy.

The forty-eight new-born Negro infants in this selected group were roentgenographed within the first two days of life. Seven showed evidence of abnormality, cupping or flange formation in one or more of the bones. Cupping of the ulnas was present in each of the seven; in two the fibulas were also involved, and in one instance the ends of each radius, ulna, tibia and fibula were altered, as shown in the accompanying table. Five of the seven we were able to reexamine after an interval of several weeks. Two, studied thirteen weeks after birth, showed marked cupping and irregularity of all the bones (figs. 1 and 2). One infant showed cupping of the ulnas alone at 8 weeks; another, at 5 weeks of age, showed changes in the fibulas in addition to those noted in the ulnas at birth. One infant, reexamined at 3 weeks of age, was normal.

Of the two infants showing cupping at birth who were not reexamined, one died and autopsy was not obtained, and the mother of the other refused to have her baby restudied.

Results of Roentgen Examination at Birth and a Subsequent Examination at a Later Date *

	First Examination				Second Examination						
Baby	Ulna	Fibula	Radius	Tibia	Ulna	Fibula	Radius	Tibia	Age at Second Examination	Maternal Prenatal Environment	Cord Wassermann Reaction	Maternal Wassermann Reaction
1	+	..	..	..	+	+	..	..	5 wks.	Very poor	Neg.	Neg.
2	+	+	..	..	+	+	+	+	13 wks.	Very poor	Neg.	Neg.
3	+	..	..	..	+	..	..	..	8 wks.	Poor	Neg.	.....
4	+	..	..	..	Not repeated					Poor	Neg.	Neg.
5	+	..	..	..	+	+	+	+	13 wks.	Fair	Neg.	Neg.
6	+	..	..	..	0	0	0	0	3 wks.	Good	Neg.	Neg.
7	+	+	+	+	Died					Poor	Antic. comp.	Neg.

* The presence of cupping is indicated by a plus sign.

These studies clearly indicated the existence of cupping in the new-born. From the clinical course, with the development at a later date of the unmistakable rachitic deformity, it appeared that the cupping was probably due to congenital rickets. In an attempt to confirm these observations, we next studied roentgenographically and by histologic sections the ends of the long bones of still-born infants. Cupping was again

Fig. 3.—Ulnas of still-born normal infant; cupping indicated by arrows (microscopic section shown in figure 4).

4. Hess, A. F.: Rickets Including Osteomalacia and Tetany, Philadelphia, Lea & Febiger, 1929.

5. Pommer, G.: Untersuchungen über Osteomalacie und Rachitis, Leipzig, F. C. W. Vogel, 1885 (quoted by Hess, footnote 4).

observed roentgenographically (fig. 3); but, on microscopic study of sections of the ends of the bones, none of the evidences of rickets were found. Instead of an irregular line at the diaphyso-epiphyseal junction made up of numerous prolongations of cells sent out by the cartilaginous overgrowth, as is characteristic of rickets, a perfectly regular and normal arrangement of columns was found. However, the zone of preparatory calcification, instead of joining the zone of proliferating cartilage as a straight or convex line as is usual in normal bone, presented a concave surface (fig. 4). This concavity was responsible for the cupping noted roentgenographically.

Fig. 4.—Section of ulna of still-born baby (fig. 3) showing a concavity in which the zone of preparatory calcification joins the zone of proliferating cartilage. This concavity is seen as cupping roentgenographically in figure 3.

SUMMARY

1. In a series of forty-eight new-born Negro infants, cupping of the long bones was found in seven; of these, unmistakable evidence of clinical rickets appeared in four from five to thirteen weeks after birth.

2. A similar deformity was found roentgenographically in still-born infants, but on histologic examination there was no microscopic evidence of rickets.

3. The cupping was due to a concave variation from the usual normal straight or convex line at the junction of the zone of proliferating cartilage and the zone of preparatory calcification.

CONCLUSION

Roentgenographically recognizable cupping is sometimes present normally in the ends of the long bones of new-born infants, caused by a normal variation in the manner in which the zone of preparatory calcification joins the zone of proliferating cartilage.

235 South Fifteenth Street—Medical Times Building.

The Value of Life.—Fortunate is the youth who discovers early the positive value of existence itself. . . . If one would find examples of normal healthy-mindedness as well as egoism, fear, superstition, and conceit, read Dickens and Hawthorne and Kipling. Better still go among the workers in our industries and on our farms.—Burnham, W. M.: The Wholesome Personality, New York, D. Appleton and Company, 1932.

Clinical Notes, Suggestions and New Instruments

A HOLLOW KIDNEY STONE

HOWARD L. CECIL, M.D., BALTIMORE

Stones that have remained in the ureter for a long time occasionally have holes through them. I have such a specimen, which was removed from a man who gave a history of ureteral colic for several years. Other urologists have found similar specimens. The method of formation of these stones is similar to that of other calculi. The deposit is made on the primary calculus, but it follows the circumference of the ureter, leaving a groove or a hole through the stone.

The specimen presented here is so unusual and the conditions contributing to its formation so rare that it seems wise to report it. I have not found the report of a similar case. Joly says it is impossible for hollow stones to form. He did not, however, consider such unusual conditions as those contributing to the formation of this stone.

History.—A man, aged 31, complained of a pain in each kidney, worse on the left side. The patient's father had tuberculosis; the patient had been associated with him during eight months of his illness.

The patient stated that he had had an injury to the spine three years before. No defects could be found. His previous history was otherwise negative except for the following:

When the patient was 3 years old, he was kicked by a horse on the right side. The three lower ribs were fractured and there was evidently an injury to the right kidney. He had hematuria for about three days but recovered completely in about three weeks. During the following sixteen years there was no trouble. While in the navy, he fell from a hammock and again injured the right side. He again had hematuria, which recurred at intervals during the following eight years. There were numerous attacks of severe pain in the right side, accompanied by nausea and vomiting, but no chills or fever. During all these eight years, there was a thin, watery, urethral discharge. This was diagnosed as gonorrhea and treated as such while he was in the navy. He stated that no exposure occurred which could have accounted for gonorrhea.

Fig. 1.—Appearance of stone in plain roentgenogram.

Eight years after the injury in the navy he consulted a surgeon, who made a roentgen examination and found a stone in

the right kidney. A cystoscopic examination was not done. The stone was removed through a pyelotomy. After the operation the surgeon told the patient that he was sorry he had not removed the kidney.

Following the operation, there was no urethral discharge and no hematuria, but the patient had almost constant pain in the right kidney region. One year after the removal of the stone, pain began in the left kidney region. This had gradually grown worse until, on admission, it was very severe and worse

Fig. 2.—Pyelogram of kidney four years after removal of stone.

than that in the right side. The pain in the left side was located in the back beneath the last rib. It did not radiate. The pain in the right side radiated to the rectum, bladder and testicle. He again noticed hematuria three days before; there had been none for twenty-four hours.

Examination.—General physical examination was negative. There was no tenderness over either kidney region; neither kidney could be felt.

The sphincter tone was good. The rectum was normal. The prostate was larger than normal. It was indurated throughout, particularly on the outer borders. The seminal vesicles could not be palpated, except the lower portion, but appeared thickened. The secretion contained considerable pus.

Examination of the urine was negative for albumin, sugar, pus, blood, casts and infection (smear).

A phenolsulphonphthalein test resulted in the return of 60 per cent of the dye in the first half hour, and 10 per cent in the second half hour.

A cystoscope entered with ease. The prostatic orifice and bladder were normal. A number 8 catheter was passed with ease up the left ureter. A number 6 passed with difficulty up the right.

Nothing was obtained from the right kidney. Examination of the left kidney was negative for pus and infection. Phenolsulphonphthalein appeared in three minutes; 40 per cent was collected in fifteen minutes.

Roentgenograms made before the removal of the stone showed a shadow 3 by 2 cm. opposite the second lumbar vertebra (fig. 1) just between the twelfth rib and the psoas muscle. The shadow was faint, with the greatest density at the periphery. The outline of the kidney was not shown.

Pyelograms done four years after the removal of the stone (fig. 2) showed ureters of normal size and position. The pelvis of the right kidney was circular and measured 1 cm. The calices were represented by two small projections 0.5 cm. in diameter and length. A pyelogram of the left kidney was negative.

Following this examination, the temperature rose to 105 F. and remained high during the following two days. There was considerable nausea and vomiting. The urinary output was scant. There was considerable pain, most marked in the left kidney region. The urine, which had been free of pus, now contained a great deal, as well as many bacilli. For fear that the left and only functioning kidney might be infected, another cystoscopic examination was done. Apparently clear urine was coming from the left kidney, but a thick, creamy pus exuded from the right ureteral meatus. Since the temperature was accounted for by the infection of the right kidney, ureteral catheterization was not done, as it seemed impossible to drain the kidney adequately by this method. The patient quickly recovered from this flare up but refused operation at this time. He returned one month later and the right kidney was removed.

Operation and Result.—The scar was excised and the usual approach to the kidney easily carried out. In spite of a careful search, the kidney was not found. The ureter was identified and was followed upward into a mass of scar tissue about 4 cm. long and 3 cm. thick. This was removed and represented the remains of the kidney.

The recovery was uneventful. The patient was discharged from the hospital ten days after the operation. The infection of the urine quickly cleared up after the operation.

Pathologic Examination.—This was done by Dr. Gofarth. The specimen was an irregular structure, measuring 3 by 2 by 2 cm. Tags of fatty tissue were attached. A duct extended from the mass for about 3 cm. On section, it was found that the central part of the specimen had undergone cystic change. Cloudy mucoid fluid was present.

Microscopically, section through the specimen showed chiefly scar tissue. Here and there, remnants of tubules and occasionally an obliterated or obliterating glomerulus was seen. In the center of the specimen, cystic structure lined by pelvic mucosa was demonstrable. Section through the ureter showed the entire wall heavily infiltrated with chronic inflammatory cells.

The diagnosis was total destruction of the kidney secondary to infection.

The stone removed at the previous operation was light yellow and measured 3.5 by 3 by 2 cm. (fig. 3). It was a mere shell. Its weight was 1.8 Gm. There were three holes in it, two at the upper end and one at the lower end. The outer surface was slightly irregular but smooth. There was no evidence that stone had been formed by deposits on the pelvic wall. The inner surface was very smooth. The wall was thin, varying from about 0.1 to 0.5 mm.

Fig. 3.—Stone removed at previous operation.

Analysis of the stone showed that it consisted chiefly of phosphates, but it had some organic material in it. There were no oxalates or uric acid.

COMMENT

Most probably, the severe injury to the kidney when the patient was 3 years old caused a blood clot to fill the pelvis of the kidney. Urinary salts were deposited on the clot, which disintegrated, leaving a thin shell. At about this time the kidney ceased functioning; otherwise the center of the stone would have been filled with salts, and the stone would have grown up into the calices. It is known that in some cases of severe trauma the kidney secretes for a short time and then ceases to function. It is to be assumed that this is what happened in this case.

The injury he suffered sixteen years later does not seem to have been sufficient to destroy the kidney but was probably sufficient to cause trouble in one already filled with a stone and probably severely infected. All subsequent symptoms can readily be accounted for by the infection in a destroyed kidney.

The case demonstrates again the advisability of late examination of patients who have had severe kidney injuries.

518 Medical Arts Building.

A PUMP FOR CLINICAL AND LABORATORY PURPOSES WHICH EMPLOYS THE MILKING PRINCIPLE

C. M. VAN ALLEN, M.D., PEIPING, CHINA

The instrument here presented pumps fluid or gas through a rubber tube by the action of a series of rollers on a tube. It has been in use for several years and has proved advantageous for numerous clinical and laboratory operations, including direct and indirect blood transfusion, aspiration of fluids from body cavities, infusion, administration of artificial pneumothorax, and circulation between appliances for various purposes. The transfusion of blood and the administration of pneumothorax are the more recent accomplishments and are done with particular facility. The milking principle of the pump deals well with

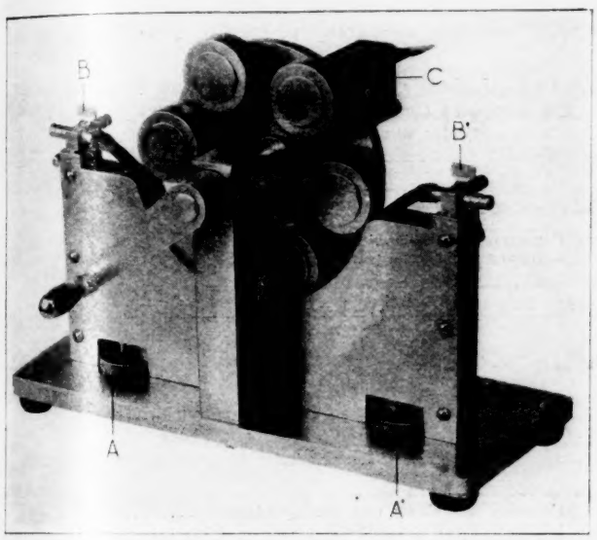

Fig. 1.—The pump.

viscid, sticky or coagulable fluids while pumps that depend on the action of pistons or automatic valves are liable to obstruction. Additional features are the continuous stream, accurately measurable delivery, instantly reversible action, production of ample degrees of both pressure and suction, and ready adaptability to aseptic operation.

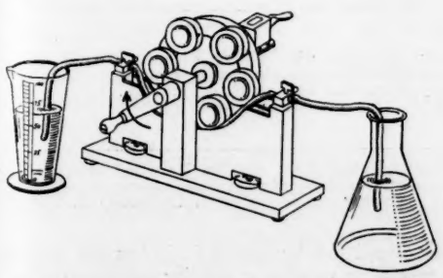

Fig. 2.—Method for calibrating the pump. The number of revolutions required to displace 100 cc. of water into the graduated container is determined and the displacement at each revolution is calculated. These values serve thereafter for estimating displacements while pumping either liquids or gases.

The pump has a wheel 14 cm. in diameter, mounted vertically with shaft and bearings on a base (fig. 1).[1] A driving handle is attached to the shaft. Six rollers are mounted on bearings at regular intervals along the periphery of the wheel, and they are met and pressed against from below by a semicircular track 30 cm. long. The track is supported on springs, the tension of which is adjustable by two thumb-screws (*A*, *A'*). Between the rollers and the track lies a rubber tube, which is held in place by connection to two short metal tubes fixed at the ends of the track. Each metal tube is T shaped and has two free limbs for the attachment of outside lead-tubes. One of the free limbs carries a stopcock (*B*, *B'*). An automatic counter (*C*) on the shaft records the revolutions of the wheel. Construction is metallic and durable throughout, except for the tube under the rollers, which is made of live rubber and is replaceable from stocks of standard hospital tubing. The tube suitable for most purposes has an internal diameter of about 6 mm., but larger ones, up to 1 cm. in caliber, can be used. The tubes in the pump, together with any lead-tubes that may be attached, are removable without separation from one another.

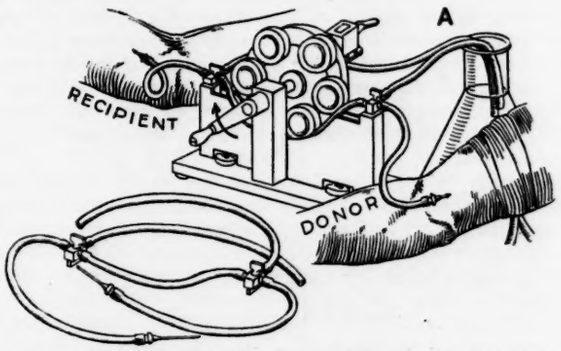

Fig. 3.—Method for direct blood transfusion. Tubes at *A* lead to a flask of saline solution. All tubes are filled with saline solution beforehand and are flushed with it at any time that transfusion is temporarily stopped. This is done by opening the stopcocks of the tubes to the saline solution, one at a time, and by pumping in the appropriate directions. The cocks are kept closed, as shown, at other times. Inset shows the tubes and needles assembled and removed from the pump preparatory to sterilization for whole blood transfusion.

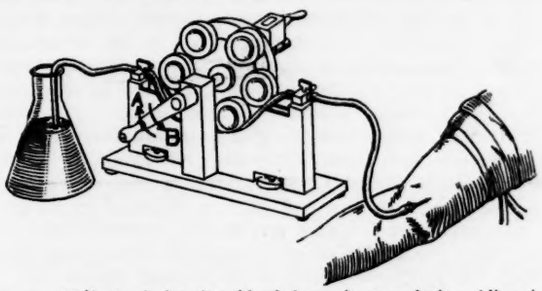

Fig. 4.—Method of drawing blood into citrate solution (direction of rotation *A*) and of injecting citrated blood (direction *B*) for indirect blood transfusion. Aspiration and injection of fluids in other parts of the body are performed similarly.

Pumping is accomplished by turning the wheel; the rollers drive the contents of the tube ahead and the elastic recoil of the tube draws in more contents from behind. When resistance at the ends of the tube interferes with these effects, pressure is produced ahead and suction behind, either of which may be

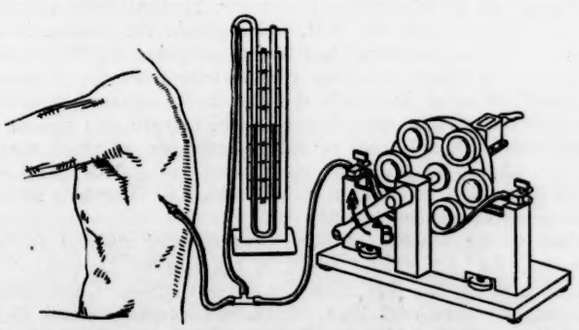

Fig. 5.—Method for administering (direction *A*) or eliminating (direction *B*) pneumothorax. It is only necessary to stop pumping at any time to obtain the intrathoracic pressure from the manometer.

as great as the rubber can carry without bursting from its connections or collapsing. The tension of the springs must be sufficient to obliterate completely the lumen of the tube but not great enough to cause the rollers to push the tube forward. While the total volume pumped must be calculated from the number of revolutions, the volume per revolution should be determined by trial beforehand, by pumping water into a graduated container (fig. 2). A 6 mm. tube delivers about

From the Department of Surgery, Peiping Union Medical College.
1. A few pumps may be obtained from the Peiping Union Medical College, Precision Shop.

10 cc. at each revolution. The figure for water applies also for more viscid fluids and for gases. The error in such calculations should not exceed 0.5 per cent; but care must be taken that the rate of pumping does not exceed the rate of supply, which event is indicated at once by the collapse of the tube on the intake side. For aseptic operation, all tubes to be used are first assembled, then detached from the pump without separation from one another (fig. 3, inset), sterilized by boiling and reinserted at the time of operation. Reinsertion can be done without contaminating the outsides of the free ends of the lead-tubes, or the interior of any part of the system of tubes. Before an operation is begun the entire system may easily be pumped full of fluid and all the air eliminated, if this is desired.

Some clinical uses and methods are illustrated in figures 3, 4 and 5. Complete details for performing artificial pneumothorax and whole blood transfusion are to be reported in separate publications.

Originality is not claimed for the use of the milking principle, since pumps of other designs have employed it before, as for instance that designed by DuNuöy. However, the pump described here is the only one known to me which has sufficient precision and adaptability for general medical purposes.

CORONARY THROMBOSIS WITHOUT PAIN: ITS INCIDENCE AND PATHOLOGY

NATHAN SMITH DAVIS III, M.D., CHICAGO
Assistant Professor of Medicine, Northwestern University Medical School

There is a syndrome that is not associated with angina which may follow coronary thrombosis more frequently than has generally been reported. It is characterized by the abrupt onset of dyspnea, which may be paroxysmal or continuous and is unprovoked by exertion; and by shock, lowered blood pressure, disordered or weakened heart action, fever, leukocytosis, pericardial friction or embolic complications. Death may ensue in a few hours or days from ventricular fibrillation or rupture. There may be a partial recovery, after a long convalescence, which, usually in less than two years, is followed by an intractable congestive heart failure and death. Aubertin and Lereboullet [1] have reported a series of cases of coronary thrombosis in which this syndrome was present in about 20 per cent, and the anginal syndrome in about 80.

In a review of the records of patients at the Alexian Brothers' Hospital, Chicago, in whom a diagnosis of coronary thrombosis could be made, basing it on history, physical and laboratory observations and electrocardiograms, twenty patients were found who had had precordial pain or distress and sixteen who complained of dyspnea, abrupt in onset and unprovoked by effort, but did not complain of pain (table 1).

A study was also made of the records of the Department of Pathology of Northwestern University Medical School from Jan. 1, 1925, to June 30, 1931, to determine the relative incidence of the syndrome without history of pain. In this series of fifty-three cases, including the thirteen from the Alexian Brothers' Hospital in which the diagnosis was confirmed by necropsy, twenty-one were found in which there was coronary thrombosis with a history of pain, twenty-one in which there was no history of pain, and eleven cases of sudden death in which there was no history at all (table 2). The two series of cases are combined in table 3.

How is the absence of pain or precordial distress to be accounted for? Herrick [2] states in his Harvey Lecture: "It has been suggested that normally certain areas of the heart are not only less vital than others, indifferent or silent they have been called, but also less sensitive. At autopsy fresh infarcts are sometimes found associated with multiple areas of fibrosis that speak for previous obstruction of small branches, yet no pain has been noted, no pain even announcing the recent infarction. There has evidently been a very gradual and progressive narrowing of the artery by sclerotic processes. The area irrigated by the artery has become relatively inactive, relatively anesthetized by destruction of vessels, nerves and functioning muscles, so that a painful response to the new obstruction is lacking. The final complete obstruction comes without a sudden shock, the element of surprise is lacking as the heart is in a sense prepared for the supreme insult. Abrupt heart failure with its dyspnea and other phenomena may be present, but pain may be lacking. These are the 'substitution symptoms' in the hyposensitive described by Libman. As Obratzow and Straschesko expressed it, dyspnea may be the pain equivalent."

It is generally believed that the pain both of the angina of effort and of coronary thrombosis is due to a relative ischemia of the heart muscle; that it is similar in origin to the pain arising in skeletal muscle in which there is a relative ischemia whether produced by pathologic processes or by artificial means.[3] From a study of the pathologic records in the series reported, it appears that in the cases not associated with pain the coronary thrombosis caused not an area of relative ischemia, but one of absolute ischemia, with complete necrosis of tissue, an anemic infarct as pointed out by Sutton.[4] When the patient survives for some weeks or months, a cardiac aneurysm often forms at the site of the infarction. In some instances the conditions were similar to those described by Herrick in the passage cited; in others the infarct was not associated with multiple areas of fibrosis but was apparently due to obstruction of an end artery.

It appears from this study of hospital and pathologic records that coronary thrombosis with a syndrome characterized by the abrupt onset of dyspnea and heart failure, unprovoked by effort, may be more common than is generally believed; that this syndrome may be due to the formation of an area of absolute ischemia, an anemic infarct, whereas the syndrome characterized by "severe, enduring, substernal or epigastric pain, unprovoked by effect," [2] is due to the formation of an area of relative ischemia.

700 North Michigan Avenue.

TABLE 1.—*Incidence of Coronary Thrombosis Without Pain in the Series of Cases Diagnosed as Coronary Thrombosis at Alexian Brothers' Hospital, Chicago*

	Number	Per Cent	Confirmed by Necropsy
Coronary thrombosis with history of pain...	20	56	8
Coronary thrombosis without history of pain.	16	44	5
	36	100	13

TABLE 2.—*Incidence of Coronary Thrombosis Without Pain in the Series of Cases of Coronary Thrombosis from the Department of Pathology, Northwestern University Medical School*

	Number	Per Cent
Coronary thrombosis with history of pain.....	21	40
Coronary thrombosis without history of pain.....	21	40
Coronary thrombosis without history (sudden deaths)	11	20
	53	100

TABLE 3.—*Incidence of Coronary Thrombosis Without Pain in in the Series of Cases from Alexian Brothers' Hospital and the Department of Pathology, Northwestern University Medical School* *

	Number	Per Cent
Coronary thrombosis with history of pain.....	36	47
Coronary thrombosis without history of pain.....	29	38
Coronary thrombosis without history	11	15
	76	100

* The thirteen cases from Alexian Brothers' Hospital in which the diagnosis was confirmed by necropsy also appear in the series from the Department of Pathology, Northwestern University Medical School.

1. Aubertin, C., and Lereboullet, Jean: Arch. d. mal. du cœur **27**: 705-721 (Nov.) 1929.
2. Herrick, J. B.: Am. Heart J. **6**: 589 (June) 1931.
3. Lewis, Thomas: First Frank Billings Lecture of the Thomas L. Gilmer Foundation of the Institute of Medicine of Chicago, Oct. 31, 1931: Proc. Inst. Med., Chicago **8**: 318 (Nov. 15) 1931.
4. Sutton, D. C.: Cardiac Pain, J. A. M. A. **97**: 1369 (Nov. 7) 1931.

Council on Physical Therapy

THE COUNCIL ON PHYSICAL THERAPY OF THE AMERICAN MEDICAL ASSOCIATION HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

H. A. CARTER, Secretary.

THE H-H INHALATOR ACCEPTABLE

The H-H Inhalator, manufactured by the Mine Safety Appliances Company, Pittsburgh, is used, according to the firm, for the "successful resuscitation of victims of carbon monoxide poisoning, gas asphyxia, electric shock, drowning, and asphyxia in the new-born," and as "an adjunct to prone pressure method of artificial respiration."

There are two types of H-H Inhalator on the market; namely, the portable type and the hospital type.

Portable Type H-H Inhalator.

The portable type is equipped with two 16 cubic foot cylinders of Carbogen, a proprietary product consisting of carbon dioxide 7 per cent and oxygen 93 per cent, complete with breathing bag, facepiece, tubes, gages and valves. The shipping weight complete is 72 pounds.

The hospital type is equipped with two 200 cubic foot cylinders, one filled with Carbogen (carbon dioxide 7 per cent, oxygen 93 per cent) and the other with chemically pure oxygen, mounted with a panel board on a substantial hospital cart, so that it may be easily moved about the emergency room, operating room or to other locations in the hospital. Its shipping weight complete is 515 pounds.

DIRECTIONS

How to use the device:

1. Open cylinder valve and valve between cylinder and pressure gage.
2. Open low pressure regulating valve one complete turn until breathing bag is inflated, then turn pointer back to 10 on the dial.
3. Inflate cushion and place the mask over the nose and mouth of the patient.
4. Watch breathing bag for indications of patient's respiration.
5. When the patient's breathing increases, open the low pressure regulating valve to increase the flow of the Carbogen (carbon dioxide 7 per cent, oxygen 93 per cent) so as to keep the breathing bag from collapsing each time the patient inhales.
6. Apply inhalator until patient is breathing freely and entirely conscious.

DESCRIPTION OF PRONE PRESSURE METHOD

In using the prone pressure method, place the person on his abdomen, and remove from his mouth all foreign bodies, such as false teeth, tobacco and gum; the tongue usually falls forward of its own weight, but see that it is forward. Turn his head to one side and rest it on his forearm, so that the mouth and nose will not come in contact with the ground, and extend the other arm forward.

Kneel and straddle the victim's thighs, facing his head. The palms of your hands are placed on the small of the back with the fingers over the ribs, the little finger just touching the lowest rib, the thumb alongside the fingers, the tips of the fingers just out of sight. With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear on the person. This operation, which should take about two seconds, must not be violent lest the internal organs be injured. The lower part of the chest and also the abdomen are thus compressed and air is forced out of the lungs. Now immediately swing back slowly to remove the pressure, thus returning to the original position. Through their elasticity, the patient's chest walls expand and his lungs are thus supplied with fresh air.

After two seconds, swing forward again and repeat deliberately about fifteen times a minute the double movement of compressing and releasing, thus causing a complete respiration in about four seconds. Continue artificial respiration until natural breathing has been restored or a physician has arrived.

COMMENT

The H-H Inhalator is simple in design and practical in operation. Two cylinders of Carbogen (carbon dioxide 7 per cent, oxygen 93 per cent) should provide a continuous supply for long periods. Spare cylinders can be inserted without interrupting operation. Special valves are used for the simple manual control of the gas from the cylinders to the reducing valve. The pressure gage registers in atmospheres the supply of prepared oxygen available for use from either cylinder. The McCaa Type reducing valve regulates the flow of gas at low pressure, which does not exceed 5 pounds per square inch. The low pressure regulating valve graduated in liters per minute controls the flow of the gas to the patient. A safety or relief valve protects the patient from injury due to high pressure in the breathing bag. The rubberized fabric breathing bag permits the operator to observe each respiration of the patient. Wire reinforced hose assures free flow of the gas from the breathing bag to the patient. As a part of the facepiece, the check valve chamber eliminates any dead air space and provides the patient with a supply of fresh air and permits the easy elimination of each exhalation. The facepiece is transparent and permits observation of the condition of the mouth and nose of the patient. The facepiece is provided with a pneumatic rubber cushion which assures a perfect fit. Tongue forceps and an oral screw are mounted in the lid ready for use.

The name of the inhalator is derived from the fact that it was developed by Dr. Yandell Henderson and Dr. Howard W. Haggard of Yale University. The initials (H-H) of the names are used.

The Council on Physical Therapy accepts the H-H Inhalator for inclusion in its list of devices for physical therapy.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, Secretary.

COD LIVER OIL (See New and Nonofficial Remedies, 1931, p. 259).

Scott's Norwegian Cod-Liver Oil (Plain).—It has a vitamin A potency of not less than 1,000 units per gram as determined by the method of the U. S. Pharmacopeia and a vitamin D potency of not less than 250 units per gram when tested by the method of the American Drug Manufacturers Association.

Dosage.—For patients over 5 months of age 4 cc. (1 fluidrachm) three times daily.

Manufactured by Scott & Bowne Laboratories, Bloomfield, N. J. No U. S. patent. U. S. trademark 17960.

Scott's Norwegian Cod-Liver Oil (Flavored).—Scott's Norwegian cod-liver oil (plain), containing 0.78 per cent of a mixture of oils of peppermint, sweet birch, cassia and bitter almond as flavoring.

Scott's Emulsion of Cod-Liver Oil.—It has a vitamin A potency of not less than 140 units per gram as determined by the method of the U. S. Pharmacopeia and a vitamin D potency of not less than 70 units per gram when tested according to the method of the American Drug Manufacturers Association (*J. Am. Pharmaceutical A.* **20:** 588 [June] 1931). Scott's emulsion of cod liver oil is prepared from Scott's Norwegian cod-liver oil (plain) 27.9 per cent (30 per cent by volume); glycerin 12.5 per cent, acacia 1.56 per cent, tragacanth 1.46 per cent, flavoring 0.15 per cent, agar 0.03 per cent, and water to make 100 per cent.

Dosage.—For adults 15 cc. (4 fluidrachms) three or four times daily; for children 15 cc. (4 fluidrachms) twice daily.

Scott's Norwegian cod-liver oil (plain) complies with the U. S. P. standards for cod liver oil. In addition, it is required to have a content of fat-soluble vitamin A, determined by the U. S. P. method, of not less than 1,000 units per gram, and an antirachitic potency, determined by the method of the American Drug Manufacturers Association (*J. Am. Pharmaceutical A.* **20:** 588 [June] 1931) of not less than 250 units per gram.

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORTS.

W. A. PUCKNER, Secretary.

"ANTI-CEPT" NOT ACCEPTABLE FOR N. N. R.

"Anti-Cept," according to the Anti-Cept Company, Los Angeles, is a "Vaginal Antiseptic Powder, Safe—Pleasant—Effective" which is applied in the form of a powder by means of a powder blower.

No statement of the composition of "Anti-Cept" appears on the label of the package. In an advertising circular, the following statement of composition is given: "Chloral Hydrate 10%, Silver-Nitrate Powder 2%, Menthol 1%, Boric acid 55%, Alum 5%, Quinine Sulph. 2%, Kaolin 25%." The formula furnished the Council by the Anti-Cept Company differs from the formula just quoted in that the amount of boric acid is given as 56% and the amount of quinine sulphate as 1%.

No evidence for the rationality of this complex mixture or of its effectiveness was furnished the Council. The silver nitrate component of the mixture becomes incompatible with the other ingredients, especially the chloral, at least when water is added. The following questionable statement in reference to the chloral hydrate contained in the mixture was made to the Council: "This is used as a depressor action on the secretory nerve fibers, supplying the glands of the cervix. It also has a sedative action on the individual. It is a known fact that the vaginal discharge is most prevalent in the nervous type of individual." Although the preparation is not claimed to contain volatile oils, and menthol is the only declared constituent related to essential oils, the claim is made in the information sent the Council that "It is a deodorant composed of various oils which are soothing and have a pleasant effect on the individual. . . ."

The following misleading and essentially false statement is made in the advertising circular: "Anti-Cept is highly recommended by the medical profession as a vaginal antiseptic. Its value has been proven. It replaces the antiquated methods of treating ulcerations, erosions and infections of specific and nonspecific origin of the cervix."

Anti-Cept is ineligible for admission to New and Nonofficial Remedies because it is an unscientific complex mixture of indefinite composition, which is marketed under a noninforming, therapeutically suggestive name and with unwarranted claims.

EUBETIN NOT ACCEPTABLE FOR N. N. R.

Eubetin "for Diabetes" is a product of Eubetin G.m.b.H., Hamburg, Germany, Aesculap Pharmaceutical and Chemical Co., Inc., New York (G. W. Steiger Co.), acting as U. S. distributor.

Eubetin, according to the information furnished the Council, has the following percentage composition: "Natr. bic. 67%; Magn. carb. 6.70%; Kal. bicarb. 13.40%; Calc. Phosph. 5.40%; Natr. sulf. 2.95%; Kal. sulf. 0.82%; Natr. chlor. 1.20%; Extract. bact. (bac. Chauvoei); carb. lign. subt. adsorb. 2.53%." While the same statement of composition appears on the submitted packages, the advertising circular enclosed with the packages declares: "It is impossible to keep the ratio between the various compounds of every series of manufacture the same. Every time the bacteriologic extract is newly prepared, the ratio must be compounded afresh, according to the results of the animal experiments. Thus an even efficacy of the total compounds is guaranteed." However, neither the advertising nor the information furnished the Council contains any statement in regard to the method by which it is claimed that the potency and uniformity of the preparation is controlled, nor is there even an informative statement in regard to the composition of the "bacteriological extract."

The following statement in reference to the composition of Eubetin is offered in the advertising: "EUBETIN consists mainly of two groups of ingredients. The first is inorganic. It is so compounded that it specially prepares the way for action of the organic group. The latter consists of substances which Collip has called 'Glukokinines.' They resemble in their function the animal insulin, being, however, produced from the tissues of lower animals and plants. The 'Glukokinines' contained in EUBETIN are of bacteriological extraction, and are obtained from certain branches of the bacillus chauvoei." About eight years ago, considerable attention was given to an insulin-like substance which appeared to be contained in a variety of plants, bacteria, and even animal tissue. To this substance or group of substances the name "glucokinin" was applied. At that time efforts were being made to utilize these glucokinines as substitutes for insulin. In this country considerable attention was given to a blueberry leaf extract, and in 1927 the Council issued a report on the experimental status of this preparation.

Although much experimentation was done with this preparation, its manufacturer has not placed it on the market.

In the advertising which accompanies the Eubetin package, it is stated that "EUBETIN may be used in all forms of Diabetes . . . ," and it is claimed that the effect is "permanent." The drug is to be taken by mouth, it being claimed that the destruction of the "bacteriological extract" is prevented by its being "embedded in charcoal," so that it is "not absorbed by the stomach but by the bowels." No evidence for the effectiveness of Eubetin as a substitute for insulin is offered in the advertising, nor was such evidence submitted to the Council. The name "Eubetin" (good for diabetes) is not only not informative of the composition of the product but is therapeutically suggestive.

The Council declared Eubetin unacceptable for New and Nonofficial Remedies because its composition is indefinite, because no evidence is offered that it possesses therapeutic value or that its potency is demonstrated or controlled; because it is sold under a therapeutically suggestive name which is noninformative of the composition of the product, with unwarranted claims in such a way as to lead the public to place false dependence on it in a disease the management of which requires the supervision of a physician.

DE-GERM NOT ACCEPTABLE FOR N. N. R.

De-Germ contains, according to the label, "Essential Oils" (the identity of which is not declared) 4 per cent, "Sodium and Potassium Oleates (Soaps)" 2.5 per cent and solution of formaldehyde U. S. P. 10 per cent. Since the pharmacopeial formaldehyde solution is required to contain not less than 37 per cent of formaldehyde, it appears that De-Germ is a soap solution containing about 3.7 per cent of formaldehyde admixed with essential oils. According to the Dale Products Co., which requested consideration of the product, De-Germ is "the Perfect Purifier" and is a disinfectant, deodorant and germicide which "Helps Prevent all Contagious Diseases." The invitation to "Try a Few Drops in the Bath, the Washing Machine and the Dishpan or on your Handkerchief," which appears on the label, may lead the purchaser to place false dependence on the product. It is claimed that De-Germ is an "especially efficient Disinfectant and Germicide" which is to be used freely "to combat the spread of contagious diseases, such as colds, influenza, scarlet fever, diphtheria, etc." As evidence of the efficacy of De-Germ, a report is quoted from what is designated to be a "Nationally Known Laboratory," in which it is stated that, while germs were found on culture plates exposed in a room that could be tightly closed, there was no development of germs on such plates when they were exposed in the same room after the walls, floors and ceiling had been sprayed with De-Germ according to directions. It is well known that when used properly, formaldehyde is a most efficient disinfectant. When a formaldehyde preparation is sprayed in a room that is not tightly closed and in which the concentration of the formaldehyde can therefore not reach an effective level, and in which the temperature and humidity cannot be controlled, such use gives no protection from contagious diseases.

De-Germ is an unoriginal formaldehyde preparation which is marketed with unwarranted claims in such a way as to lead the user to place false dependence on it, and under a name which is not descriptive of its composition but therapeutically suggestive instead.

When the preceding report was sent to the Dale Products Co., Detroit, a reply was received stating that this firm had been absorbed by the Century Chemical Products Co., but the new owner presented no evidence which permitted a revision of the Council's report.

Committee on Foods

THE FOLLOWING PRODUCTS HAVE BEEN ACCEPTED BY THE COMMITTEE ON FOODS OF THE AMERICAN MEDICAL ASSOCIATION FOLLOWING ANY NECESSARY CORRECTIONS OF THE LABELS AND ADVERTISING TO CONFORM TO THE RULES AND REGULATIONS. THESE PRODUCTS ARE APPROVED FOR ADVERTISING IN THE PUBLICATIONS OF THE AMERICAN MEDICAL ASSOCIATION, AND FOR GENERAL PROMULGATION TO THE PUBLIC. THEY WILL BE INCLUDED IN THE BOOK OF ACCEPTED FOODS TO BE PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION.

RAYMOND HERTWIG, Secretary.

PETRA'S LONG AND SHORT KEW BEE BREAD

(Sliced and Unsliced)

Manufacturer.—Petra Baking Company, Olean, N. Y.

Description.—A white bread made by the sponge dough method.

Manufacture.—The sponge dough ingredients, patent flour, water, lard, yeast and a yeast food containing calcium sulphate, ammonium chloride, sodium chloride and potassium bromate, are mixed in a high speed mixer. The sponge dough is fermented for from four to five hours, after which are added flour, water, salt, sucrose, lard and powdered skimmed milk to make the completed dough, which is cut into pieces of desired weight. The pieces are fermented for a short time, molded into loaf form, panned, further fermented, baked for from thirty to thirty-five minutes, cooled, and wrapped in wax-paper.

The factory, equipment and storage rooms are kept in strictly sanitary condition.

Analysis (submitted by manufacturer).—

	per cent
Moisture (entire loaf)	34.7
Ash	0.9
Protein (N × 6.25)	9.4
Fat	1.6
Crude fiber	0.3
Carbohydrates other than crude fiber (by difference)	53.1

Calories.—2.6 per gram; 74 per ounce.

Claims of Manufacturer.—A bread of good quality.

BANQUET TEA—EXTRA FANCY ORANGE PEKOE

Manufacturer.—McCormick and Company, Inc., Baltimore.

Description.—A blend of India and Ceylon black fermented "Orange Pekoe" teas packed in tins.

Manufacture.—This orange pekoe tea is blended from hill grown India and Ceylon orange pekoe tea leaves, which are hand picked, withered, rolled, fermented and cured in the country of origin.

On arrival at the tea factory the green tea leaves are examined, weighed and spread on tats or trays of hemp cloth spread on wire screen for withering. The tea is withered from sixteen to twenty-four hours, during which process considerable moisture is lost and it becomes soft and pliable. The green leaves contain about 75 per cent moisture, the withered leaves about 37 per cent.

The withered leaves are rolled, which process breaks the leaf cells, liberating the juice and spreading it over the surface of the leaves, thus bringing it in contact with the air and permitting oxidation and fermentation. The leaf is also twisted in the rollers to reduce its bulk and improve the appearance. The rolled leaves are fermented on tables provided with shelves on which the tea is thinly spread. The leaves assume a coppery color in this operation. The aroma and color are developed in the fermentation, during which oxidation process an abundant supply of cool, humid air is provided. The fermented tea is placed in a tea drying machine composed of wire bottomed trays on which the leaves are spread and subjected to a continuous current of dry hot air from a furnace. The drying checks the fermentation. The dry tea is black.

The dry tea is hand picked to remove red leaves or other impurities and is sorted in sifting machines, which divide the tea into a number of grades, of which orange pekoe is the most highly regarded by the American trade. The graded tea is stored in bins until ready for shipment, when it is packed in lead or aluminum lined cases which are hermetically sealed.

The orange pekoe tea in the American plant is selected for thickness and rich, fine flavor, is thoroughly "vacuum" cleaned of tea dust, blended in mixing machines and packed by automatic filling machines in air tight tin containers.

Analysis (submitted by manufacturer).—

	per cent
Moisture	7.0
Total ash	5.9
Water soluble ash	3.8
Acid insoluble ash	0.2
Alkalinity of water soluble ash....39 cc. normal alkali solution per 100 gm.	
Petroleum ether extract	1.3
Volatile ether extract	0.3
Crude fiber	11.1
Tannin	13.8
Caffeine	3.6
Water extract	45.4
Facing material	none
Exhausted tea leaves	none
Foreign leaves	none
Foreign astringent substances	none
Other foreign substances	none

Claims of Manufacturer.—Black fermented "Orange Pekoe" tea is for tea beverage and all table uses.

BABY RALSTON

(Wheat endosperm and embryo)

Baby's First Cereal Food

Manufacturer.—Ralston Purina Company, St. Louis.

Description.—A cereal mixture of farina (wheat endosperm) and wheat embryo (germ).

Manufacture.—Farina (wheat endosperm) and a smaller quantity of wheat germ are mixed, briefly processed at 60 C. to destroy any insect infestation, and automatically packed in cartons.

Analysis (submitted by manufacturer).—

	per cent
Moisture	7.1
Ash	0.4
Fat (ether extract)	1.8
Protein (N × 5.7)	15.3
Crude fiber	0.5
Carbohydrates other than crude fiber (by difference)	74.9
Iron (Fe) (colorimetric method, J. Biol. Chem. **67**: 48, 1926)	0.003
Copper (Cu) (ferrocyanide method, Yoe, Photometric Chemical Analysis **1**: 182, 1928)	0.0003
Phosphorus (P)	0.27
Calcium (Ca)	0.07

Calories.—3.8 per gram; 108 per ounce.

Vitamins.—A rich source of vitamins B and E, and a fair source of vitamins A and G, as a result of the presence of wheat embryo.

Claims of Manufacturer.—A high protein wheat cereal, designed especially for the infant's first cereal food. It contains two and one-half times as much vitamin B_1 as whole wheat. Its fine texture permits its use in adult smooth diets.

CLOVERDALE SARSAPARILLA

Manufacturer.—Cloverdale Spring Company, Baltimore.

Description.—A carbonated beverage prepared from Cloverdale Mineral Water, sucrose, citric acid, and flavoring materials: oils of sweet birch and sassafras, extracts of vanilla, ginger root, pipsissewa, gentian and yarrow, and syrup of wild cherry bark; colored with caramel.

Manufacture.—The sucrose and citric acid and the flavoring materials in definite proportions are dissolved in Cloverdale Mineral Water (THE JOURNAL, March 5, 1932, p. 816). The solution is bottled and carbonated as described for Cloverdale Mineral Water.

Analysis (submitted by manufacturer).—

	per cent
Moisture	90.7
Total solids	9.3
Ash	0.1
Fat	0.0
Protein (N × 6.25)	0.0
Reducing sugars, as dextrose	1.6
Sucrose (copper reduction method)	5.6
Titratable acidity as citric acid	0.03
Flavored with essential oils and extracts	
Undetermined	2.0

Calories.—0.3 per gram; 9 per ounce.

Claims of Manufacturer.—A bottled, carbonated sarsaparilla beverage.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, MAY 21, 1932

THE NEW ORLEANS SESSION

New Orleans is no amateur in the entertaining of a convention. On three previous occasions it provided for the annual session of the American Medical Association. This year it continued the enviable reputation that it had established. When the Association met in New Orleans in 1920, accommodations were not nearly so adequate as at present. The great auditorium takes suitable care of most of the activities of the meeting, including the exhibits and many of the sections. Other sections and the House of Delegates met in hotels.

The 1932 session followed the form of previous meetings, opening with the exhibits, the clinical lectures and the House of Delegates on Monday, May 9. While the attendance failed to reach the 1920 figure, it approximated that figure closely. Considering the extraordinary financial situation, this would seem to be cause for congratulation. The clinical lectures were exceedingly well attended and were correlated with exhibits, particularly on poliomyelitis. Many prominent orthopedic and neurologic specialists remarked that the physician who heard these lectures and studied these exhibits would no longer have the slightest excuse for failure to diagnose a case of poliomyelitis at the earliest possible moment. The scientific exhibit excited admiration for its quality and particularly for the artistic finish of the display. The technical exhibits were remarkable this year for the dignity and the scientific exactitude developed, particularly by pharmaceutical manufacturers, in the displays. Much interest was aroused by the number and quality of the exhibits of foods, an evidence of the manner in which dietetics has entered into scientific medicine.

The sessions of the House of Delegates were well attended. The interest displayed by delegates in the various discussions and resolutions indicated the feeling of responsibility of members of the House of Delegates in their deliberations for the benefit of the public and of the profession. The House of Delegates gave special attention to questions of legislative action, particularly concerning the care of veterans and the questions of maternal and infant mortality. Every reference committee of the House expressed appreciation not only of the valuable services rendered by the organization in national and state affairs but also of the personal services to physicians, which have been built up in the headquarters office.

The medical profession of New Orleans and of the state of Louisiana provided entertainment distinctive of Southern hospitality. The opening banquet for the officers and delegates, the opening session at which the President delivered his address, and the President's reception were placed in beautiful settings with excellent music and marked particularly by the light summer costumes of both men and women guests.

Perhaps the most significant feature of this session of the Association was the spirit displayed in the House of Delegates, in the various sections and in the exhibits. Here was a spirit that could not be depressed—a demonstration of the innate conviction of all that medical science must go on, that the practice of medicine is essential to human happiness, and that the physician and those associated with him in his work must carry on regardless of extraneous circumstance.

THE IRON REQUIREMENT OF CHILDREN

While the rôle of iron in the maintenance of health has long been recognized, the possible participation of the element in biologic reactions has only recently become clearly revealed. Today we are justified in asserting that iron is an essential dietary constituent, not only for the production of blood and muscle hemoglobin but also for necessary components of all cells.[1] That is why its availability in foods and its metabolism in the body command particular attention. It is merely necessary to mention some of the questions that come to mind in this connection in order to realize the importance of the subject. How much iron is in the human body at different ages? What are the available sources of iron? How much is needed for maintenance and for growth, and how are these requirements affected by different conditions? Does the amount of iron in the food have any influence on growth?

The answer to such problems is complicated by the analytic difficulties that attend the chemical investigation of the distribution of iron. A recent writer [1] has well pointed out that the estimation of iron in biologic materials is a difficult undertaking, because a rapid and accurate method still remains to be attained, although the recent improvements that have been introduced are promising. Reported analyses of biologic materials for iron must be critically examined in the light of the analytic method employed, and some of the results

1. A Recent discussion of this subject may be found in Growth and Development of the Child, Part III, Nutrition, New York, Century Company, 1932, p. 225. Some of the data considered here are taken from this new volume.

in the older literature have to be discarded because of improbable analytic values. According to this reviewer, the iron content of the body at maturity is calculated at about 4.5 Gm., more or less, most of which can be accounted for by the blood. Between the first and twenty-first years (the latter age is taken only for convenience), 4,000 mg. of iron is retained. Distributed over twenty years, this amounts to an actual daily growth of 1.8 mg. of iron.

The adult has the opportunity for such a wide range in the choice of his food that the problem of his requirement of iron is perhaps not quite so circumscribed as that of the growing young child, whose regimen is dictated in larger degree by those who provide his less diversified sustenance. Until recently the only modern balance observations in childhood relating to the iron requirement have been those of Rose [2] and her collaborators at Teachers College in New York. Considerable surprise was occasioned several years ago when they reported that even in dietaries that might have been considered perfectly satisfactory the daily inclusion of one egg yolk per child resulted in better development and in slightly higher hemoglobin figures. Careful metabolism studies with respect to iron were subsequently made on one child, a girl aged 2 years and 7 months. These showed that, on a daily intake of 4.64 mg. of iron, a negative balance of 1.10 mg. resulted. The authors have estimated without further evidence that 8.50 mg. would not only be sufficient to bring about iron equilibrium but also allow for growth. This figure amounts to 0.76 mg. of iron per hundred calories of ingested food. McKay [3] has reported an average of 8.17 mg. of iron in the diets of preschool children in private homes, as compared with 4.37 mg. in the diets of children in an institution.

The most recent essay in this important field of research comes from the University of Minnesota, where Leichsenring and Flor [4] have conducted typical balance experiments in which the utilization of iron at two levels of intake was compared in healthy children ranging in age from 35 to 56 months. This is the characteristic preschool age. The results of the food analyses indicate that the iron content of foods may show considerable variation from the most commonly used figures. Diets that were planned to contain 5 and 8.5 mg. of iron actually contained only 3.25 and 6.5 mg. On a diet containing 3.25 mg. of iron, an average of 1.2 mg. was retained daily, whereas, on a diet containing 6.5 mg. of iron, 3.2 mg., or nearly three times as much as during the period of lower iron intake, was retained. The observed maintenance need of the children in this study was approximately 0.12 mg. per kilogram. On the basis of body weight, according to Leichsenring and Flor, the maintenance requirement of the child is similar to that of the adult. The iron requirement for growth, as observed in this study, was approximately 0.2 mg. per kilogram. It is customary to allow a considerable margin of safety above observed requirements of the various inorganic elements. If this margin is estimated at 50 per cent, it would make a standard allowance for children of this age of 0.48 mg. per kilogram, or 0.62 mg. per hundred calories, or a total of 8.2 mg. daily. Thus the most careful investigators in this field are in essential agreement as to the iron needs of the preschool child. One cannot depend on milk alone for an adequate supply of iron. That is why the diet chosen should be varied to include, as early as proper, generous amounts of foods that are comparatively rich in iron.

2. Rose, Mary S.: The Influence of Prolonged Administration of Egg upon the Hemoglobin Content of Children's Blood, J. Biol. Chem. **67**: xx (Feb.) 1926. Rose, Mary S., and McCollum, E. L.: Studies in Nutrition: II. The Effect of Adding Egg to a Diet Already Adequate, ibid. **78**: 549 (July) 1928. Rose, Mary S.; Vahlteich, E. M.; Robb, E., and Bloomfield, E. M.: Iron Requirement in Early Childhood, J. Nutrition **3**: 229 (Nov.) 1930.

3. McKay, H.: Ohio Agric. Expt. Station Bull. 400, 1926.

4. Leichsenring, J. M., and Flor, I. H.: The Iron Requirement of the Preschool Child, J. Nutrition **5**: 141 (March) 1932.

DIGESTIVE LEUKOCYTOSIS

Circumstantial evidence has occupied an extremely important place in the evolution of conceptions in physiology. Life is maintained through the maintenance of a complex series of so-called vital equilibriums in which both physical and chemical factors have significant parts. It can be expected that a disturbance of one equilibrium is accompanied by readjustments of factors maintaining a related equilibrium. It becomes almost impossible to adjust one regulatory mechanism without eliciting a response in several different directions. However, one can point out concomitant processes, essentially unrelated, which either by their chronological parallelism or by their ease of experimental study have been mistakenly associated in a causative relation. An example of apparent misinterpretation of such associated occurrences is the usual conception of digestive leukocytosis. First described in the middle of the last century, this phenomenon was early associated with the digestion and absorption of protein. After a meal the number of circulating white blood cells was augmented markedly, the increase being greatest in the lymphocyte fraction, which frequently showed twice the concentration observed in the fasting state. Furthermore, these cells were found in greater numbers in the intestinal mucosa and in the lumen during the height of digestion and absorption. It seemed reasonable, therefore, to assume that leukocytes were concerned with the absorption of protein.

A vigorous and convincing note of doubt that there exists a functional connection between digestion per se and the frequent concomitant leukocytosis has been sounded by Garrey and Butler [1] of Vanderbilt University in Nashville, Tenn. These investigators point out that the concentration of circulating leukocytes is subject to a number of factors and that the mechanisms causing a change are surprisingly sensitive. The white

1. Garrey, W. E., and Butler, V.: Am. J. Physiol. **100**: 351, 1932.

cell count of normal individuals at work is uniformly between 8,000 and 9,000 per cubic millimeter, whereas the count is between 5,000 and 6,000 an hour after the subject has assumed a recumbent posture. This so-called basal level is observed as long as rest and immobility are maintained. In several experiments, after the basal level had been attained, a meal rich in protein was consumed by the subject and the prone position maintained. In no single instance did the leukocyte count rise above the basal level. A high carbohydrate meal produced like results. When the erect posture was assumed, the white cells rose to the usual higher activity level. In another experiment the erect person with the higher leukocyte count consumed a dinner and immediately lay down; there followed a progressive decrease in the concentration of white cells to the basal level.

To determine the influence of the filling of the stomach and change in temperature of the contents, the Nashville investigators caused resting subjects to drink large quantities of lemonade of various temperatures. Counts made immediately showed an increase over the basal level with both the cold and the hot drink, the latter showing the greater effect. Similar studies were made on laboratory animals under anesthesia. Rapid distention of the stomach with air or water is followed by an immediate increase in the leukocyte count, which disappears within half an hour. It is pointed out that "the promptness and transiency of these reactions place them definitely into the category of nervous reflexes affecting the vascular area and producing a sudden redistribution of leukocytes, with more gradual readjustment to normality." Apparently the rigorous exclusion of all factors except the one under consideration, together with the adoption of a basal level for comparison, has simplified a situation which has long been a physiologic enigma. It appears that the name digestive leukocytosis is a misnomer arising from an erroneous association of parallel but largely unrelated activities.

DEAN LEWIS, M.D.
PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

Current Comment

DEAN LEWIS—PRESIDENT-ELECT

The House of Delegates at the New Orleans Session elected Dean Lewis, surgeon-in-chief of the Johns Hopkins Hospital, to the office of President-Elect of the American Medical Association. Through his service to scientific medicine, marked by attendance at many scientific meetings throughout the country, through his contributions to scientific medical literature, through his distinguished career in the World War, and through his contribution to the work of the American Medical Association, Dr. Lewis is widely known to the medical profession of this country and of the world. Dean Lewis was born in Kewanee, Ill., Aug. 11, 1874. He received his A.B. degree from Lake Forest University in 1895 and the degree of doctor of medicine from Rush Medical College in 1899. Early he became associated in a teaching position with his alma mater, acting as assistant in anatomy from 1900 to 1901 and associate from 1901 to 1903. He then taught surgery as an instructor from 1903 to 1919; he was associate professor from 1919 to 1920 and professor from 1920 to 1924. In 1924 he received invitations to the chairs of surgery in several important medical schools and finally accepted the professorship of surgery in the University of Illinois College of Medicine, which position he filled from January to July, 1925. Then he was appointed professor of surgery at the Johns Hopkins University School of Medicine and surgeon-in-chief to the Johns Hopkins Hospital. His membership in medical societies includes the American Surgical Association, the American Association of Anatomists, the American Physiological Society, the American Society of Clinical Surgery, the Interurban Surgical Society and the Southern and the Western Surgical Associations. During the World War he served as lieutenant colonel and was awarded the Distinguished Service Medal. He has been made a foreign member of Italian and German surgical societies and is a member of the Medical Council of the Veterans' Administration. Since the establishment

of the *Archives of Surgery* in 1920, Dr. Lewis has been editor-in-chief. He is also the editor of a system of surgery and a correlated periodical, the *International Surgical Digest*. In the American Medical Association, Dr. Lewis has been a member of the House of Delegates, representing the Section on Surgery in 1915, 1916 and 1917. He was also secretary of the Section on Surgery, 1912-1913, and chairman, 1919-1920. At the Philadelphia Session he was made a member of the Council on Medical Education and Hospitals. His record and his repute promise a useful and valuable career as President-Elect and President of the Association.

MONTGOMERY WARD & COMPANY WITHDRAWS LABORATORY SERVICE

Following publication in THE JOURNAL of the report of the laboratory of the American Medical Association relative to its survey of the urine examining service conducted by Montgomery Ward & Company, many physicians throughout the country wrote to Montgomery Ward & Company asking for an explanation of this project. In reply the following letter has been sent by the president of Montgomery Ward & Company, Mr. Sewell Avery, to many physicians and to stockholders:

"Thank you for sending the copy of the American Medical Association Report. Upon careful investigation we have found that their position in the matter was in large part justified, although the check test which we made before adopting the service had indicated their [Universal Research Laboratories] analyses to be accurate. Because of these new developments we have discontinued the service, and are accepting no further orders."

THE JOURNAL wishes to commend the president of Montgomery Ward & Company for taking this action. It would be well if lay corporations in general could recognize the fact that the practice of medicine is distinctly a profession for trained workers and that any lay group which enters into the field is likely to develop a fiasco such as that which eventuated for Montgomery Ward & Company.

VITAMIN B AND METABOLISM

The problem of the precise rôle of vitamin B in nutrition is by no means entirely solved. There can no longer be any doubt that it is a factor essential for physiologic welfare. This statement, based on the repeatedly demonstrated genesis of disorders when there is a shortage of vitamin B in the diet and a restoration of health when suitable sources of the vitamin are again supplied, does not reveal the details of its function. The abrupt failure of appetite, after a preliminary period, has been a conspicuous effect of lack of vitamin B, the outcome varying with the age and the species of animal under consideration. The digestive secretions are apparently not modified. Cowgill of Yale University, who has devoted much attention to this subject, has pointed out that the marked systemic manifestations characteristic of advanced cases of vitamin B deficiency suggest that the loss of the desire to eat in such instances is due as much to a generalized systemic disturbance as it is to an abnormal condition localized in the alimentary canal. Several years ago it was pointed out in THE JOURNAL that vitamin B should not be overlooked in its possible relations to certain types of gastric atony. There have long been assumptions, to say the least, that vitamin B is somehow associated with metabolism.[1] Final pronouncements are by no means yet warranted. Preliminary studies by Cowgill and his co-workers indicated that the vitamin B requirement of an animal is significantly increased when the metabolic rate is augmented. This has already been shown to be true when the voluntary food intake is increased through vigorous exercise.[2] In a more recent investigation, Himwich, Goldfarb and Cowgill[3] have demonstrated that when metabolism is heightened in the well known manner by thyroid administration the requirement for vitamin B seems to be increased. Thus, in dogs it was found that during hyperthyroidism anorexia appeared in from one half to two thirds of the time required during the control period when the diet was devoid of the vitamin. The animals successfully maintained their weights by voluntary ingestion of food only when receiving sufficient amounts of vitamin B. According to the Yale investigators, these facts may be of clinical significance. The marked loss of body weight characteristic of hyperthyroidism is well known; in the light of these experiments it is quite possible, the Yale investigators state, that vitamin B deficiency is an etiologic factor here. Administration of large amounts of vitamin B to patients with hyperthyroidism is certainly worthy of clinical trial. If one were permitted to generalize, they add, it might be said that vitamin B therapy is indicated in those conditions which are characterized by an increase in the metabolic rate.

Association News

MEDICAL BROADCAST FOR THE WEEK

American Medical Association Health Talks

The American Medical Association broadcasts on Monday and Wednesday from 2:25 to 2:30 p. m., over Station WBBM (770 kilocycles, or 389.4 meters), and on Friday from 1:25 to 1:30 p. m., over Station WBBM and other stations of the Columbia Broadcasting System.

The program for the week is as follows:

May 23. A Monument to the Dog.
May 25. Flies are Dangerous.
May 27. Foods and Food Advertising.

There is also a fifteen minute health talk sponsored by the Association on Saturday morning from 11:15 to 11:30 over Station WBBM, Chicago.

The program for the week is as follows:

May 28. Unconsciousness.

1. A review of the theories and evidence is given by Sherman, H. C., and Smith, S.: The Vitamins, ed. 2, New York, Chemical Catalog Company, 1931.

2. Cowgill, G. R.; Rosenberg, H. A., and Rogoff, J.: Studies in the Physiology of Vitamins: XVI. The Effect of Exercise on the Time Required for the Development of the Anorexia Characteristic of Lack of Undifferentiated Vitamin B, Am. J. Physiol. **98**: 589 (Nov.) 1931.

3. Himwich, H. E.; Goldfarb, W., and Cowgill, G. R.: Studies in the Physiology of Vitamins: XVII. The Effect of Thyroid Administration upon the Anorexia Characteristic of Lack of Undifferentiated Vitamin B, Am. J. Physiol. **99**: 689 (Feb.) 1931.

PROCEEDINGS OF THE NEW ORLEANS SESSION

MINUTES OF THE EIGHTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT NEW ORLEANS, MAY 9-13, 1932

HOUSE OF DELEGATES

First Meeting—Monday Morning, May 9

The House of Delegates convened in the Tip Top Inn of the Roosevelt Hotel, and was called to order at 10 a. m. by the Speaker, Dr. F. C. Warnshuis.

Preliminary Report of the Reference Committee on Credentials

A preliminary report of the Reference Committee on Credentials was submitted by the chairman, Dr. J. D. Brook, Michigan, who reported that 101 delegates with proper credentials had registered.

On motion duly seconded and carried, Dr. John A. Card, New York, and Dr. W. E. Bannen, Wisconsin, who had lost their credentials but who were properly identified, were seated.

The Speaker, not hearing any objections, declared that the list of delegates in the hands of the Reference Committee on Credentials would constitute the roll of the House for the first meeting.

Adoption of Minutes of Philadelphia Session

The Secretary stated that the minutes of the Philadelphia session of the Association had been printed and put into the hands of all members of the House of Delegates, and that no corrections or amendments had been received. No objections being heard on the floor of the House, the minutes were adopted as printed, on motion of Dr. James N. Vander Veer, New York, seconded by Dr. J. W. Burns, Texas, and carried.

Address of the Speaker, Dr. F. C. Warnshuis

The Vice Speaker, Dr. Albert E. Bulson, Indiana, took the chair while the Speaker read his address, which was referred to the Reference Committee on Reports of Officers:

Members of the House of Delegates:

I am privileged again to preside during your annual deliberations. My studied endeavor will be to do so impartially and justly, and to aid you to record your action expeditiously and constructively. I solicit your assistance and forbearance.

Times change and we must change with them. The sincere student recognizes that we are at present in the vortex of readjustment along every avenue of human endeavor. New professional and public relationships are being formulated and instituted. You who represent and speak for the entire profession of scientific medicine are intimately concerned. On you who constitute this House of Delegates rests the tremendous responsibility of molding and guiding public opinion and formulating the fundamental principles that will bring about acceptable readjustments wherein all the traditions and achievements of the medical profession will be conserved and its relationship to patient and public enhanced. It is not within the province of your Speaker to lead or indicate the scope of your program. That is for this House to determine. Your Speaker's comment is intended to stress the importance of the serious duty that confronts you; to urge that you accept the commission and accomplish well directed leadership. Your constituents have the faith and confidence that your wisdom and judgment will be sound and that your final conclusions will be productive of acceptable solutions and leadership that will inspire public endorsement. Your Speaker urges that every delegate pause in thoughtful reflection and accept his rôle in initiating and applying policies that the hour and day impel.

I would urge anew the importance of the most thorough consideration of every proposal that is advanced. Reference committees frequently consider a resolution without having presented to them evidence in support or in refutation of the purpose that it embodies. There have been occasions when the action taken resulted in embarrassment to the Association, its officers and councils. Intelligent action cannot be accomplished without information and discussion. The sponsors of a resolution and those who hold opposite views or opinions should place before the reference committees all data and substantiating or refuting facts. It is the duty of delegates to appear before the reference committees on all referred business and aid in forming tenable recommendations.

It would be highly desirable if all reference committees would decline to bring in recommendations or express opinions on subjects regarding which no evidence or facts are submitted. This procedure will result in eliminating injudicious action and obviate reversal of opinions and expressions at some subsequent time.

COMMITTEE APPOINTMENTS

May I state anew that committee appointments are made from the list of delegates sent me by your Secretary some thirty days before the annual session. In forming committees your Speaker endeavors to give representation to every state. There are 66 committee assignments to be selected from 175 delegates. Every delegate cannot be assigned to committees. To give representation to every state is not possible. I have endeavored to be governed by the Fellowship records of each state, the number of delegates and the state's representation on boards, councils and committees.

EXECUTIVE SESSION

In order that the Tuesday afternoon executive session shall not aimlessly concern itself with irrelevant matters, your Speaker recommends that you authorize your Secretary, chairman of the Board of Trustees and Speaker to formulate a program of pending questions that the year's activities and experience indicate as meriting executive consideration, the consideration of other subjects to remain subject to your decision as to whether the House desires to accord to them executive attention. This policy would be conducive to well directed conclusions and is worth while considering for future sessions. Delegates informed as to the subjects presented for consideration would be prepared to discuss them and reach wise decisions. The suggestion is made for your consideration.

REPORTS TO STATE ORGANIZATIONS

On several previous occasions it has been recommended that delegates complete the discharge of their responsibilities and duties by rendering to their respective state organizations a detailed and explanatory report of activities of this House. This is most essential and quite desirable. State organizations stand in need of and are entitled to that information. They need to know the detailed action of this House for guidance in the administration of state organizational affairs. National unity is unattainable without such instructive and guiding knowledge.

Some delegations render detailed reports with helpful explanatory comments, some delegations merely submit an attendance report and some there are who make none. You will render a distinct contribution to this Association and to your own state if you as a delegate or delegation render specific, detailed explanatory reports on the business transactions of each session of this House. It is on the recommendation of your officers, councils and committees that your Speaker stresses this recommendation.

DEATHS

It is with sadness of heart and deep regret that we bow to the immutable law of life that yearly records the deaths of esteemed fellow delegates. We adjourn our annual session, return to our homes and then suddenly and all too frequently the message comes, Thrash, Polak, Hornbogen have departed from among

us. It is left for us, the living, to enroll their names and deeds on the honor scroll of our Association and acknowledge their contributions to our Association, and the profession it represents. So today, in solemn recognition and tribute, your Speaker officially announces the deaths of J. O. Polak, New York; E. C. Thrash, Georgia; A. W. Hornbogen, Michigan; Donald Macrae, Iowa, and David Ross, Indiana. We have reasons for believing that these departed members maintained the sacred and honored traditions of their profession in the services they rendered. Communal life was enhanced and enriched by their ministrations.

Your Speaker acknowledges with sincere appreciation all the many courtesies and the kindly consideration you have accorded. A personal contact with this House of Delegates over a period of twenty years moves me to affirm emphatically that the affairs and interests of organized medicine rest in safe hands. Final judgment is characterized by fairness and wisdom. I am certain you will translate and effect the highest and noblest in medicine. My good wishes are yours.

Reference Committees

The Speaker resumed the chair and appointed the following reference committees:

SECTIONS AND SECTION WORK

F. W. Cregor, Chairman.....Section on Dermatology and Syphilology
Bundy Allen.....Florida
W. G. Ricker.....Vermont
James S. McLester.....Section on Practice of Medicine
A. J. Bedell.....New York

RULES AND ORDER OF BUSINESS

B. L. Bryant, Chairman.....Maine
Fred Moore.....Iowa
R. W. Fouts.....Nebraska
C. R. Scott.....Idaho
W. H. Myers.....Georgia

MEDICAL EDUCATION

Irvin Abell, Chairman.....Kentucky
Seale Harris.....Alabama
F. S. Crockett.....Indiana
J. F. Burnham.....Massachusetts
W. A. Pusey.....Illinois

LEGISLATION AND PUBLIC RELATIONS

Grant C. Madill, Chairman.....New York
J. F. Hagerty.....New Jersey
Southgate Leigh.....Virginia
C. J. Whalen.....Illinois
A. A. Ross.....Texas

HYGIENE AND PUBLIC HEALTH

Junius B. Harris, Chairman.....California
C. T. Pigott.....Montana
D. E. Sullivan.....New Hampshire
W. F. Draper.....Virginia
H. C. Macatee.....District of Columbia

AMENDMENTS TO CONSTITUTION AND BY-LAWS

N. B. Van Etten, Chairman.....New York
W. F. Donaldson.....Pennsylvania
J. W. Amesse.....Colorado
J. H. O'Shea.....Washington
H. M. Johnson.....Minnesota

REPORTS OF OFFICERS

C. E. Mongan, Chairman.....Massachusetts
W. R. Steiner.....Connecticut
A. R. McComas.....Missouri
J. F. Smith.....Wisconsin
W. A. Cook.....Oklahoma

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

W. F. Braasch, Chairman.....Minnesota
J. N. Vander Veer.....New York
Wells Teachnor, Sr.....Ohio
J. W. Burns.....Texas
F. C. E. Mattison.....California

CREDENTIALS

J. D. Brook, Chairman.....Michigan
Mather Pfeiffenberger.....Illinois
J. F. Hassig.....Kansas
M. L. Stevens.....North Carolina
J. N. Hunsberger.....Pennsylvania

MISCELLANEOUS BUSINESS

J. R. Bloss, Chairman.....West Virginia
W. R. Bathurst.....Arkansas
H. B. Everett.....Tennessee
Randolph Winslow.....Maryland
G. P. Johnston.....Wyoming

EXECUTIVE SESSION

J. W. Van Derslice, Chairman.....Illinois
S. P. Mengel.....Pennsylvania
A. W. Booth.....New York
J. F. D. Cook.....South Dakota
J. Q. Graves.....Louisiana

Sergeant-at-Arms.....George A. Leitner, New York
Assistant Sergeant-at-Arms.....R. L. Green, Illinois

Address of President E. Starr Judd

The Speaker presented the President, Dr. E. Starr Judd, Rochester, Minn., who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

The report of the Board of Trustees makes evident the increasing amount of work that is demanded of this Association each year. The activities reach into every branch of society and are becoming more important. The annual report shows a marked extension of the work of each department, and it also shows that some of these departments are taking on new duties.

In spite of extension of the work demanded of the Association and in spite of the fact that the income to the Association is reduced, nevertheless the Association is in a most satisfactory condition. The Board of Trustees, the General Manager, the Business Manager and the Editor of THE JOURNAL deserve much credit for this excellent showing of the Association the last year.

RESPONSIBILITIES OF THE MEMBERS OF THE HOUSE OF DELEGATES

It has been said that every man owes some of his time to the upbuilding of the profession to which he belongs, and I think that you who are members of the House of Delegates are the best illustrations of service to the medical profession. Many of you are contributing a considerable amount of time and your best efforts in the interest of organized medicine and for the benefit of society. Oftentimes your contribution must be at considerable sacrifice to yourself and to those dependent on you. You all deserve the greatest amount of credit, and I am sure that when you see the progress in preventive and curative medicine that is being made from year to year, and realize that this progress is largely the result of the activities which you have made possible through the building and maintaining of this great medical organization, you must feel well paid for your efforts and your sacrifices.

FUNCTIONS OF THE MEDICAL PROFESSION

The functions of members of the medical profession are, first, to advise, treat and care for those who are in need of their services; second, to plan and direct programs of preventive medicine and public health, and, third, to protect the public in every manner possible against the activities of insufficiently educated or dishonest practitioners:

1. In caring for those who are sick and injured, physicians are doing a most personal service, and whatever else happens, this must be maintained as a personal service. The profession is constantly confronted with the problem as to what is the best plan for giving adequate medical service to all of the people at all times. I think it can be said that, as a rule, the service as now furnished to society is satisfactory and adequate. Suggestions for new methods of practice are constantly being made. Many of these suggestions have to do with the economics of the practice of medicine. Others concern plans for carrying out medical service. It seems to me that organized medicine might have a more definite plan for studying these suggestions and problems. I have been informed that a committee was once in existence for the purpose of studying the various social implications of the practice of medicine but that this was some time ago. This committee was formed to give advice to the Board of Trustees, the House of Delegates and the various councils. It seems to me that a new committee might be formed, or that some member of the permanent staff might be delegated to cooperate with the bureaus and councils, for the purpose of further study of some of the plans in use in European countries, and any new plans suggested. I am not at all sure how much change, if any, should be made in our present plan, but I do think that if there was a committee working on these problems, for possibly the next five years, it might be able to suggest some changes that would help solve problems in this country. It would be possible to look into the future of medicine and to be prepared for changing conditions before they arrive, rather than to investigate conditions after the advancing tendencies have been established.

The chairman of the Committee on the Costs of Medical Care has given a preliminary report which suggests that this committee will probably recommend community health taxes.

This committee has done a tremendous amount of work and has accumulated a great deal of material that will need very careful study. In one of its reports, it reviewed an investigation of one community of 38,000 people. As I understand this report, it showed that most of these people had physical defects of one kind or another. The question that arose as I read this report was, first, What is a perfect physical specimen? and Is it necessary or advisable to attempt to correct all of these so-called defects? I believe that this illustrates some of the problems that must be carefully studied by members of the medical profession.

Caring for the sick by contract with business concerns and societies has been suggested and tried. Contract practice is probably one of the most important questions confronting the profession today. A study of the problem is being carried on by the Bureau of Medical Economics at the present time and also by some state societies. I hope that after these studies have been completed it will be possible to make some definite statement; but it is not conceivable to me that this method of practicing medicine will help to solve our present problems. Undoubtedly this form of practice will continue in certain places; it has been carried too far in other localities, and the results are not wholly satisfactory to the patient. A study of this kind necessarily involves a tremendous amount of work and time, and I feel sure that the final report on this problem will be most interesting and valuable.

There has been a tendency in some specialties and in certain communities to turn over certain cases to nurses, midwives or technicians. So far as I can see, there is no way to make the conscientious practice of medicine an easy task. And, furthermore, it has been asserted repeatedly that there are too many physicians. Although I do not believe that there are too many physicians, nevertheless I do think that in order to give the people the best care, the actual practice of medicine must be kept in the hands of physicians.

Without claiming too much, I think we may contend that we are doing very well in our present plan of practice. Progress is evident each year.

2. The second function of the medical profession concerns public health and preventive medicine. The profession may well be proud of the results accomplished in this field of endeavor. Certain infectious diseases have been greatly reduced in prevalence and severity, and others have been almost completely eradicated. Although these excellent accomplishments are largely the result of better knowledge of the exact cause of various diseases and of the application of this knowledge, nevertheless they are also due to a better understanding on the part of the people of the problems confronting medical men, and also are the result of more confidence in the profession. It seems to me, and I hope that I see clearly, that there is a better relationship between the physician and the public than there has ever been before. Undoubtedly, if this is so, it is partly due to the public meetings, and to the realization of the value of giving to the press any medical facts or information that we have. Radio programs and health talks assist in this campaign of organized medicine to keep the people informed.

Promoting public health and preventive medicine is one of the definite functions of the medical profession, and this service must not be divorced from medicine. In certain large communities it is necessary to have health officers who devote all their time to this work and who become specialists in this field. Many of the problems associated with the work must be under government supervision. All general practitioners must become familiar with the problems of public health and preventive medicine and must help in every way that they can to see that these activities are carried out adequately in their communities. At this particular time, preventive medicine is accomplishing a great deal. Organized medicine must do everything possible to escape having this function of the medical profession taken over exclusively by the government.

3. Protecting society from the irregular practices of medicine is one of the most important functions of the Association. No one realizes the tremendous commercial business carried on by these irregular concerns until such an example is offered as the one exposed this last year. It is the duty of organized medicine to expose these practices, so that the regularly constituted government authorities can prosecute the violators. The editorial departments of THE JOURNAL and of *Hygeia* are well used for this purpose when it is necessary. The satisfactory exposure of activities of this kind, it seems to me, is one of the real accomplishments of this association. Prosecution must be by the government. Irregular practices cannot be eliminated, but they can be reduced to a minimum.

GRADUATE TRAINING

The methods of practice are constantly changing, and it is necessary for each physician to continue to study. The physician's life is one of almost constant study. New things are being learned each year concerning the cause and the treatment of disease, and many of the older ideas and methods must be discarded from time to time. It is not possible for one to succeed and to progress by employing methods one was taught as a student some years ago. In order that the physician may keep abreast of the times, he must make trips to large centers of medicine, and attend clinics and courses conducted by experienced teachers where there is great abundance of clinical material. A physician who does not seek these clinics, who does not attend medical meetings, or who does not keep up his reading of medical literature, cannot do the best that might be done for his patients, and cannot hope to progress.

In former years it was possible in any of the larger cities, on certain days, to find a good clinic where there would be well chosen material presented in an interesting fashion by some well known clinician or surgeon. In the present day, most of these old, well established clinics have been allowed to go out of existence. I think that these clinics, especially for those who are surgeons, were of great value, and I am sorry that they have not been continued. I wonder whether it is due to some change in our conception of practice that has allowed this to take place. I wonder also whether science and research are overshadowing the art and the human side of practice too much. I also wonder whether the full time teaching plan for clinicians has not been a factor in allowing these important clinical days to disappear. Can a man on a full time teaching appointment retain his stimulus and the industry required to make such a clinic successful? I hope that some way may be found of reviving these regular, independent clinics, so that it may again be possible to derive the benefit of a few hours with some well known physician, surgeon or specialist.

SPECIALIZATION

The House of Delegates last year requested the Council on Medical Education and Hospitals to investigate the entire subject of specialization, and to make recommendations looking to the establishment of proper qualifications of physicians who wish to engage in special practice. Specialization has been greatly overdone and not only is responsible for less satisfactory results but also has a tendency to increase the cost. I believe the best specialists will be those who have spent some time in general practice. One of the difficulties seems to be in the medical schools where the students are directed to some special field, and where students say it is difficult at the present time to obtain a well rounded out training such as would equip one for general practice.

Nevertheless there are many fields of medicine in which the general practitioner cannot hope to be sufficiently trained. Special knowledge, special training and an abundance of experience are required to make a specialist. One of the duties of organized medicine is to make it possible for society in general as well as the medical profession to find out who are qualified specialists in the various fields. Furthermore, I believe that there is nothing more important than the regulation of specialization and the proper qualification of specialists at the present time.

Some of the specialties have established qualifying boards and are attempting to further the plan of certifying as to special qualifications. I have been informed that representatives of several clinical specialties have suggested that the National Board of Medical Examiners state its present attitude concerning the part it is willing to take in assisting the qualifying boards in the clinical specialties. The subject of specialization has been discussed in a preliminary manner at several informal conferences by the representatives of certain

specialties, and a subcommittee of the National Board of Medical Examiners. The consensus in these conferences has been that it is desirable that some dependable method of certification be devised by each of the special clinical fields, and, further, that there should be some central organization of the several qualifying bodies to insure better coordination. It has been suggested also that the American Medical Association become responsible for the publication of official lists of qualified specialists.

Several sections of the Association have already accomplished a good deal toward determining and regulating the qualifications for specialization in particular fields. It seems to me that it is advisable to do all that we possibly can to promote this activity among the sections. If the American Medical Association, cooperating with the Association of American Medical Colleges, state boards of medical licensure, the National Board of Medical Examiners, the American College of Surgeons, the American Board for Ophthalmic Examinations, the American Board of Otolaryngology, the American Board of Obstetrics and Gynecology, and such other specialty boards as may be developed can officially regulate specialization, it will have accomplished much.

HOSPITAL BEDS FOR VETERANS

One of the most important problems before society and the medical profession is the one dealing with the best plan for care of war veterans. Some of these men are sick and must be cared for. The medical profession is willing and anxious to see that the best medical attention possible is provided for them. It wants them to have exactly the same care that all other orders of society are given. It does not want them to be pauperized and to be placed in hospitals when they are not sick. It seems to me that the federal government has built enough hospitals. There are many unoccupied beds in civilian hospitals that might well be used in the care of veterans who are sick.

It is fortunate that these affairs are in the hands of an industrious and intelligent committee. The medical profession can feel hopeful and confident that the efforts of its committee, combined with those of the American Legion and the American Hospital Association, will bring forth the proper solution of this problem.

NEW BUILDING

The thing this Association needs as much as anything else is a new building for its headquarters offices. The Board of Trustees is studying this problem and I hope it will soon find that it is feasible to proceed. More space is needed adequately to house the departments as they are at the present time. Progress is being hampered in many ways by not having sufficient and good space in which to work. Not only would a new building, properly planned and adequately equipped, permit the activities of organized medicine to be more effectual, but the added possibilities for progress and development would help to keep the American Medical Association in its position of the largest and most important medical organization in the world.

Address of President-Elect Edward H. Cary

The Speaker then presented the President-Elect, Dr. Edward H. Cary, Dallas, Texas, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

I come to you after a year of partial observation of the medical activities of our country. There are many questions which will undoubtedly be brought to your attention; hence it will be unnecessary for me to mention more than three or four which I would like to accentuate.

DUAL RELATIONSHIP OF PHYSICIANS

I have been greatly impressed with the dual responsibility of the doctor. His personal relationship to patients is so vital that it must always be kept in the foreground. To preserve this intimate quality of service embodies human happiness by meeting human needs and should be harmonized with the continued flexible growth of the medical profession. Our civic relations demand that we take part in public health service. We are forced to become interested in the activities of lay organizations which are striving to solve health problems. Many of these problems have arisen from an awakened public health consciousness, which has come from the revelations of medical research. The public is groping for a more widespread application of what it believes to be medical discoveries. We are loath to believe that the enlightened public desires to interfere with the private practice of medicine, but social trends which involve medical practice should be studied, for, after all, medicine is a social function.

APPOINTMENT OF A COMMITTEE TO COOPERATE WITH BUREAU OF MEDICAL ECONOMICS

The profession must not be deterred from contributing its weight of opinion and battling for leadership in lay organizations which are interested in health matters. In my opinion, the Board of Trustees should be authorized to appoint a committee to cooperate with the Bureau of Medical Economics, this committee to study and aid in reconciling conflicting views related to the practice of medicine. These may include better cooperation on the part of the members of the profession, and a better understanding of the needs of the people as related to the individual practitioners and public health service, developing a formula outlining to what extent public health service will be acceptable and practical. This committee should consider, too, the numerous studies being made by the profession and others of the so-called high cost of medical care, reconciling conflicting views as they may affect the practice of medicine, and making available the plan most adaptable to conditions in communities seeking relief. This study should include methods of handling indigents and those of limited financial resources as a civic responsibility. For the underprivileged, some plan should be developed whereby the family may budget its health needs, an effort being made to eliminate the middleman but to conserve the right of the patient to select his doctor and to preserve the right of the physician to open opportunity on equal terms with his brother practitioner.

This committee should help to develop a plan of cooperative medicine for greater efficiency, applicable to each community, suggesting methods of practice for the purpose of making certain a correct diagnosis, partnerships between doctors being unnecessary. The fee should be commensurate with the ability of the patient to pay. There would be, through the committee, several helpful minds added to the Bureau of Medical Economics.

DEVELOPMENT OF POSTGRADUATE INSTRUCTION

I am also impressed with the need of a comprehensive effort on the part of the Council on Medical Education and Hospitals to develop postgraduate instruction. There are many component and associated medical societies which are now carrying on intensive postgraduate work. These societies need the active aid of a committee representing the American Medical Association through the Council on Medical Education and Hospitals. This committee can suggest appropriate and nonconflicting dates, can list available instructors, and can suggest subject matter most needed for elucidation. Regional clinical meetings for intensive study should be encouraged in certain geographic localities, to discourage a multiplicity of like endeavors which are apt to lessen professional interest or conflict with the meetings of the state medical societies.

Efforts should be made to cooperate with special societies now doing postgraduate work, and to encourage all such efforts when accomplished through our medical organization. It would seem highly desirable that the House of Delegates suggest to the Board of Trustees that a committee be appointed, and, with the aid of the Council on Medical Education and Hospitals, accomplish these suggestions with nominal cost to the American Medical Association.

NEED FOR CONSERVING RESOURCES

Though I am sure that the economic trend is strongly for retrenchment throughout the land, we should consider seriously any suggestion that would retard the growth of our organization. We have a tremendous task ahead of us to preserve the rights and privileges that have come through years of endeavor. I fear that the average member of our profession gives little

thought to the value of this collective effort. I sometimes wonder whether we realize what it means to the individual physician. To make effective this effort to advance the science and practice of medicine and to preserve its endowments, the Association should be made as strong financially as it is numerically. It is true that we have deliberately defended the people from many abuses, and such efforts have been rewarded with suits for large sums of money. Legal defense is always expensive, but the members of the profession in the localities immediately affected are helpless if the American Medical Association does not assume the task of exposure and defense.

No other organization in the world is giving to its members so much. Its scope embraces literature, news and information of all kinds, not to speak of the associational advantages. The *British Medical Journal*, for instance, which in size and importance is next to ours, costs $15 annually. Other foreign journals of less importance cost relatively the same, while the annual income of the average American physician is greater. The new revenue bill will undoubtedly carry increased postal rates which will add greatly to the cost of THE JOURNAL. It would seem unwise to jeopardize our progress by reducing the cost of THE JOURNAL to our members. Any reduction would be a backward step and would actually amount to very little to the individual member. I hope that any constituent society which has expressed itself in favor of a reduction in the present price of THE JOURNAL will reconsider its decision, for the beneficent influence of the organization should not be curtailed. If the medical profession is to meet its obligations and responsibilities successfully in this new commercial age, it must be able in all respects, and fully fortified.

NEW HOME FOR THE ASSOCIATION

The American Medical Association should and can be properly housed. An organization as strong as ours in its financial resources might be able now to take advantage of the greatest opportunity it will ever have to acquire the most desirable property suited to its needs, at a cost so low that what would seem an extravagance under normal conditions might be provident now.

DELIBERATIONS OF THE HOUSE

The wisdom of the House of Delegates manifested in the past justifies the hope that its deliberations will aid in solving many problems, either during this session or through the orderly procedure of referring to your distinguished Board of Trustees matters for which you are unable to find a ready solution.

It is my earnest desire to cooperate with you, and the profession generally, in advancing our professional prestige and welfare, as well as the science and practice of medicine. I am convinced that professional effort, when carried on in orderly fashion, offers to the people of this country one of the most beneficent influences they have for the common good.

Remarks of Dr. Paul Wolff

Dr. Morris Fishbein introduced Dr. Paul Wolff of Berlin, who addressed the House as follows:

Mr. Chairman:

It is a great privilege for me to convey to you and my esteemed colleagues of America my heartfelt thanks for the honor which you have conferred on me by asking me to come here to lecture to you. And I need hardly say that it is with the greatest enthusiasm that I accepted the invitation; for it has given me the opportunity not only of explaining the world situation of drug addiction as my special subject but, in connection with this, particularly the situation in Germany and the opinions of the German medical corps. At the same time I have been entrusted by the Deutscher Aerztevereinsbund, which is the professional union of all physicians in my country, and is the equivalent in Germany of the American Medical Association, to convey to you all the heartiest greetings as a means of establishing a closer and firmer relationship between your country and mine. And this will lead, I hope, to a furthering of the scientific work and professional interest of both nations.

Greetings to House

Dr. Olin West, Secretary, read a telegram of greeting from the British Medical Association and from Dr. G. E. de Schweinitz, a Past President.

REPORTS OF OFFICERS

Report of the Secretary

Dr. Olin West then presented his report as Secretary, which was referred to the Reference Committee on Reports of Board of Trustees and Secretary, with the exception of the following: The part containing amendments to the Constitution and By-Laws introduced by Dr. D. E. Sullivan, New Hampshire, by Dr. J. Gurney Taylor, Wisconsin, and by Dr. Isaac A. Abt, Section on Diseases of Children, was referred to the Reference Committee on Amendments to the Constitution and By-Laws; the resolution from the Michigan State Medical Society was referred to the Reference Committee on Legislation and Public Relations; the resolution introduced by Dr. G. Henry Mundt, Illinois, was referred to the Reference Committee on Medical Education; the part pertaining to dual membership was referred to the Reference Committee on Constitution and By-Laws, and the resolution introduced by Dr. Albert Soiland, California, and adopted at the Philadelphia Session, was referred to the Reference Committee on Constitution and By-Laws.

Report of the Board of Trustees

The Secretary presented the report of the Board of Trustees, which was referred to the Reference Committee on Reports of the Board of Trustees and Secretary.

Report of the Special Committee on Legislative Activities

Hearing no objection, the Speaker ruled that the report of the Special Committee on Legislative Activities would be presented at the executive session, Tuesday afternoon, with the exception of the portion referring to amendment to the By-Laws, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Report of the Judicial Council

Dr. George E. Follansbee, Chairman, presented the report of the Judicial Council, which was referred to the Reference Committee on Rules and Order of Business.

Report of the Council on Medical Education and Hospitals

General Merritte W. Ireland, Washington, D. C., presented the report of the Council on Medical Education and Hospitals, which was referred to the Reference Committee on Medical Education.

Report of the Council on Scientific Assembly

Dr. Roger S. Morris, Cincinnati, presented the report of the Council on Scientific Assembly, which was referred to the Reference Committee on Sections and Section Work.

Good Wishes and Good Cheer to Ill Confrère

Dr. William G. Ricker, Vermont, moved that a telegram of good wishes be sent to Dr. J. Gurney Taylor, Wisconsin, absent because of illness. The motion was seconded by Dr. Arthur C. Morgan, Pennsylvania, and carried.

NEW BUSINESS

Resolution on the Care of Veterans

Dr. H. H. Shoulders, Tennessee, presented the following resolution on the Care of Veterans, which was referred to the Reference Committee on Legislation and Public Relations:

Resolved, By the House of Delegates of the American Medical Association that, in furtherance of the plan and policy of a resolution with regard to the governmental policy of rendering medical and hospital benefits to veterans with non-service connected disabilities, adopted in Philadelphia, at the 1931 session, the principles of which we hereby reaffirm, the House of Delegates hereby gives its approval to the draft of a proposed amendment to the World War Veterans' Act, 1924, which is as follows:

"AN ACT TO AMEND THE WORLD WAR VETERANS' ACT, 1924

"Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled:

"SECTION 1. That Paragraph 10 of Section 202 of the World War Veterans' Act, 1924, approved June 7, 1924, as amended by Acts approved March 4, 1925, July 2, 1926, and July 3, 1930, is hereby amended by striking therefrom the following: "The director is further authorized, so far as he shall find that existing Government facilities permit, to furnish

hospitalization and necessary traveling expenses incident to hospitalization to veterans of any war, military occupation, or military expedition, including those women who served as Army nurses under contracts between April 21, 1898, and February 2, 1901, and including persons who served overseas as contract surgeons of the Army at any time during the Spanish-American War, not dishonorably discharged, without regard to the nature or origin of their disabilities."

"SECTION 2. The World War Veterans' Act, 1924, is further amended by adding thereto the following:

"(1) Each honorably discharged veteran of any war, military expedition, or military occupation with ninety days or more of actual service, shall be entitled to the following disability benefits for disabilities not resulting from injury or disease suffered or contracted in military or navy service:

"A. A cash benefit of $12.50 per week during any period of total disability from disease or injury.

"B. A hospital benefit of $4.00 per day during any period of actual and necessary hospitalization.

"(2) Such benefits shall be payable to the veteran upon satisfactory proof of the disability, furnished by the veteran to the Veterans' Bureau, upon forms and in accord with rules to be prescribed by the Director of the Veterans' Bureau; each such proof to include the supporting statement of an attending physician of good standing and repute, and, in the case of hospital benefit, the certificate of the superintendent or person in charge showing actual confinement in a hospital approved by the Director for service to veterans;

"(3) PROVIDED, no cash benefit shall be payable under this section to a veteran for any condition for which he is paid disability allowance for total permanent disability under the amendment to the World War Veterans' Act of July 3, 1930; and no benefits under this section shall be paid to any veteran for any disability resulting from his own wilful misconduct; nor for any disability for which the veteran is entitled to hospitalization under paragraph 10 of section 202 of the World War Veterans' Act, as amended by this Act, in a hospital under the control of the Veterans' Bureau.

"(4) Whenever malingering or fraudulent collusion on the part of an attending physician is suspected by the Director, any veteran claiming benefits under this section may be ordered by the Bureau to a Veterans' Bureau or to a veterans' hospital for examination, observation and report as to the existence of a condition entitling him to the benefits claimed, pending compliance with which order payment of benefits shall be suspended; and in all cases hospital records of the claimant shall be open to the inspection of the Bureau, and the claimant shall be subject to examination under the provisions of section 203 of the World War Veterans' Act, 1924, as amended.

"(5) The Director of the Veterans' Bureau shall furnish to each living veteran who may be entitled to benefits under this section a "Disability Benefit Certificate," reciting the benefits provided herein and the terms and conditions under which they may be paid and received, together with a blank form on which application and proof for such benefits may be made. The Director shall enforce the provisions of this section through and as a department of the Division of War Risk Insurance of the Veterans' Bureau.

"Section 3. The provisions of Section 1 hereof shall take effect six months from the date of this enactment; and the benefits provided in Section 2 shall accrue and commence six months from the date of enactment."

Be it further

Resolved, That the proper officers of this association be instructed to take steps to present this matter properly to every important local Legion post in the United States, with a view to securing their endorsement of the amendment. Be it further

Resolved, That the Board of Trustees be authorized and requested to place sufficient funds at the disposal of the Legislative Committee to carry on this activity, and, be it further

Resolved, That the Legislative Committee be empowered and directed to employ a full time personnel for the purpose of carrying this work forward. Be it further

Resolved, That the Legislative Committee be instructed to present the proposed amendment to the Congress of the United States for consideration, when a reasonable number of local legion posts have endorsed it. Be it further

Resolved, That, in the interest of harmony, the Legislative Committee is empowered to make changes in the wording of this proposed amendment except that there shall be no abandonment or compromise of the fundamental and underlying principles; to wit:

1. The cessation of the hospitalization of veterans with non-service connected disabilities, except as set out in the first part of paragraph 202-10 of the World War Veterans Act, and in the proposed amendment.

2. That the veteran himself shall have the right to select his physician and hospital, subject to the reasonable regulations and approval of the Veterans' Bureau.

Resolution on Increase of Personnel and Budget

Dr. C. S. Gorsline, Michigan, presented the following resolution on Increase of Personnel and Budget, which was referred to the Board of Trustees:

WHEREAS, It appears from the suggestion in the address of the President-Elect and from a careful perusal of the published report of the director of the Bureau of Medical Economics that an economic emergency exists in the affairs of practitioners of medicine in general, and

WHEREAS, It is apparent that substantial progress has been made in the study of medical economic problems and that it appears that certain phases of our economic problems demand the earliest possible consideration in order that the medical profession shall have placed at its disposal the necessary facts for intelligent action, and

WHEREAS, These problems are, in the order of their apparent importance, (1) workmen's compensation, (2) health insurance, and (3) contract practice; and

WHEREAS, The present personnel and finances seem to be inadequate to accomplish speedy results, therefore be it

Resolved, That the Board of Trustees of the American Medical Association be requested by this House of Delegates to provide such additional increase in budget and personnel as may be required to secure this important information at the earliest possible date consistent with completeness and accuracy of the data assembled.

Resolution on the Appointment of a Committee to Study Birth Control

Dr. J. D. Brook, Michigan, presented a resolution on the appointment of a committee to study birth control. On motion of Dr. J. W. Van Derslice, Illinois, seconded and carried, the resolution was laid on the table for consideration at the executive session Tuesday afternoon.

Resolution Requesting Reduction in the Subscription Rate

Dr. Edgar A. Hines, South Carolina, presented the following resolution requesting reduction in the subscription rate for THE JOURNAL from $7 to $5, which was referred to the Board of Trustees:

WHEREAS, Economic conditions are such that many members of the medical profession find it increasingly difficult to pay $7 subscription for THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, therefore be it

Resolved, By the Greenville County Medical Society in Session April 4, 1932, that a request be made of the American Medical Association to reduce the subscription of THE JOURNAL from $7 to $5 as soon as practicable.

E. A. HINES.
J. H. CANNON.

NOTE.—This resolution was submitted to the House of Delegates of the South Carolina Medical Association, April 19, 1932, and the delegates to the American Medical Association are directed to transmit the same to the House of Delegates of the American Medical Association for their consideration.

Resolution on Hospital and Health Insurance Societies in Cuba

Dr. William R. Molony, California, presented the following resolution on hospital and health insurance societies in Cuba, which was referred to the Reference Committee on Miscellaneous Business:

WHEREAS, The development of so-called "Hospital and Health Insurance Societies" has taken on so great a development in Cuba that the standards of medical practice seemingly have been seriously endangered through such organizations; and

WHEREAS, It is desirable that full and accurate information should be placed at the disposal of the medical profession of the United States concerning these Cuban organizations because in them there is an expression of the dangers which confront medical practice through the establishment of such institutions; now therefore be it

Resolved, By the Executive Committee of the California Medical Association that the California Medical Association Council be requested to instruct the delegation from this constituent state association of the American Medical Association to present this resolution to the American Medical Association House of Delegates at its next annual session at New Orleans; and be it further

Resolved, That the recommendation be made to the American Medical Association House of Delegates that, through appropriate action, steps be taken by the American Medical Association to secure full information concerning these Cuban so-called "Health and Insurance Societies" and clubs, inasmuch as such information could be of great value to organized medicine as represented by the American Medical Association and its constituent state units.

Resolution on Publication of a Digest of Major Medicolegal Decisions

Dr. Molony also presented the following resolution on publication of a digest of major medicolegal decisions to be printed in annual volumes, which was referred to the Board of Trustees:

WHEREAS, THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION prints in each of its issues a digest of major medicolegal decisions; and

WHEREAS, Such digests, if brought out in booklet form, year by year, with proper index and cross references, could be of very great value to members of the medical and legal profession; now, therefore, be it

Resolved, By the House of Delegates of the California Medical Association at its sixty-first annual session, that it requests the House of Delegates of the American Medical Association to consider the advisability of recommending to the Board of Trustees of the American Medical Association the publication, in the form of annual volumes, of these medicolegal digests which are printed in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION; and be it further

Resolved, That a copy or copies of such volume, as approved by the House of Delegates and by the Board of Trustees of the American Medical Association, be sent each year to each of the constituent state associations.

Communication on Appreciation of Auxiliary

The Speaker referred to the Reference Committee on Miscellaneous Business the following communication addressed by the advertising manager of the Woman's Auxiliary:

If the House of Delegates would send a letter of appreciation to the Auxiliary it would do more to stimulate interest than anything that you and I and all the Auxiliary leaders put together could do. Their letter after being read at the meeting could probably be placed in the Exhibit.

The meeting adjourned at 12:20 p. m., to reconvene at 9:30 Tuesday morning, May 10.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARIZONA

State Medical Election.—Dr. Clarence Gunter, Globe, was installed as president of the Arizona State Medical Association at its recent annual meeting, and Dr. Nelson C. Bledsoe, Tucson, was made president-elect. Dr. Delamere F. Harbridge, Phoenix, was reelected secretary. The next annual session will be held at Tucson in April, 1933.

CALIFORNIA

Licenses Revoked and Restored.—*California and Western Medicine* reports the following changes in the status of licentiates made at the regular meeting of the state board of medical examiners in Los Angeles, February 1-4: Dr. George H. Bland, Fresno, license revoked, February 2, for violation of probation based on narcotic charges; Dr. William B. Hamilton, license revoked, February 2, based on revocation of his Utah license on which he obtained his California reciprocity license; Dr. Alfred G. R. Castles, Los Angeles, placed on probation for five years, February 2, based on advertising contrary to law; Dr. Cary A. Snoddy, Vallejo, and Dr. Aubrey H. Staples, Oakland, placed on probation for five years without narcotic privileges, having been found guilty, February 2, of narcotic indiscretions; Dr. Roy L. Buffum, Long Beach, whose license was restored, February 2, was placed on probation for a period of five years without alcohol or narcotic privileges; Dr. John H. Seifert, San Diego, whose license was restored, February 1, was placed on probation.

New State Medical Library.—The new state medical library, authorized by the 1931 legislature for the purpose of aiding physicians, particularly in rural districts, to keep up to date in their practice, was started, May 1, with the cooperation of the University of California Medical School. The library will be maintained in two branches, one at the medical school in San Francisco, and one at the medical department in Los Angeles. From these centers medical journals and books will be sent to practicing physicians in any part of the state on request. Funds for the support of the project will come from the surplus account of the state board of medical examiners which is made up from medical license fees and taxes. An advisory committee has been appointed to supervise the work of the "packet library." Members of the committee are President Robert Gordon Sproul of the university; Dr. John H. Graves, president, state board of health; Dr. Percy T. Phillips, president, state board of medical examiners; Dr. Langley Porter, dean of the medical school in San Francisco, and Dr. George H. Kress, dean of the medical department in Los Angeles. Miss Francis Van Zandt will be the librarian.

ILLINOIS

Society News.—Dr. Edward S. Murphy, Dixon, was elected president of the Illinois Tuberculosis Association at its recent annual meeting in Danville.——The Livingston County Medical Society was recently addressed at Pontiac, among others, by Drs. William H. Holbrock and William A. Malcolm, both of Peoria, on urologic and obstetric subjects, respectively.

Chicago

Rongetti's License Revoked.—The state department of registration and education revoked the license of Amante Rongetti, May 4, on the ground of his conviction of manslaughter (THE JOURNAL, Aug. 30, 1930, p. 668).

Society News.—At the meeting of the Chicago Pediatric Society, May 17, the speakers included Drs. Charles A. Aldrich, Winnetka, on "An Anomaly of the Brain," and Bert I. Beverly on "Congenital Atresia of the Duodenum."——The Chicago Society of Internal Medicine will be addressed, May 23, among others, by Drs. Chauncey C. Maher on "Effects of Intravenous Quinidine Sulphate on the Fibrillating Auricle," and Harry A. Singer, "Valvular Pneumoperitoneum."——The Chicago Gynecological Society was addressed, May 20, among others, by Dr. George F. Hibbert on "Significance of the Streptococcus in Trichomonas Vaginalis Vaginitis."

INDIANA

Course at City Hospital.—Indiana University School of Medicine and the graduate committee of the Indiana State Medical Association are making arrangements for a series of courses, June 16-17, at Indianapolis City Hospital. The study will be arranged especially for the general practitioner so that he may have a review in the fundamentals and a knowledge of new technic in treatment.

Society News.—Dr. John R. Hurley, Muncie, addressed the Delaware-Blackford County Medical Society, April 19, on "Scarlet Fever Problem with Emphasis on Prevention."——At the meeting of the LaPorte County Medical Society, April 21, Drs. Alois B. Graham and Joseph W. Ricketts, Indianapolis, discussed "Anorectal Diseases."——Dr. Goethe Link, Indianapolis, talked on "Disturbances of the Thyroid Gland," April 11, before the Randolph County Medical Society.——"Chronic Constipation" was the subject of Dr. Arthur G. Funkhouser, Indianapolis, before the Grant County Medical Society, Marion, April 26.——Dr. Roy Lyman Sexton, Washington, D. C., addressed the Tippecanoe County Medical Society at Lafayette, May 5, on "Colon Disturbances and Involvements Including Endocrine Aspects."——The Indianapolis Medical Society will be addressed, May 24, by Dr. Ralph M. Waters, Madison, Wis., on "Carbon Dioxide Absorption from Anesthetic Atmospheres"; the society will be addressed, May 31, by Drs. Cleon A. Nafe and Homer G. Hamer on "Surgical Treatment of Acute Empyema" and "Various Causes of Perineal Swellings."——Dr. Will J. Martin, Kokomo, was elected president of the Indiana Tuberculosis Association at its twenty-first annual meeting in Indianapolis.——The Parke-Vermillion Counties Medical Society was reorganized, April 20.

KANSAS

State Medical Election.—Officers of the Kansas Medical Society are Drs. Paul S. Mitchell, Iola, president, whose term expires December 31; James D. Colt, Sr., Manhattan, president-elect, whose term expires Dec. 31, 1933; Jacob F. Gesell, Wichita, vice president; George M. Gray, Kansas City, treasurer, and John F. Hassig, Kansas City, secretary. The society will hold its seventy-fifth annual meeting in Lawrence, May 2-4, 1933.

LOUISIANA

State Medical Election.—Dr. Roy B. Harrison, New Orleans, was installed as president of the Louisiana State Medical Society at its fifty-third annual meeting, in New Orleans, May 9-10. Dr. Carl A. Weiss, Baton Rouge, was made president-elect. Other officers of the society are Drs. James T. Nix, Jr., New Orleans, Charles M. Horton, Franklin, and Willis P. Butler, Shreveport, vice presidents. Dr. Paul T. Talbot, New Orleans, was reelected secretary. The next annual meeting of the association will be held in Lake Charles.

MARYLAND

Dinner to Dr. Gardner.—Dr. William Sisson Gardner, professor of gynecology, University of Maryland Medical School, Baltimore, and chief of the gynecological staff of Mercy and University Hospitals, Baltimore, was guest of honor at a dinner, May 5, given in recognition of his many years' service in the medical school. Dr. Frank D. Sanger was toastmaster and Dr. Thomas K. Galvin was in charge of the dinner. Speakers included Drs. James Douglas Crane, Ishpeming, Mich.; James M. H. Rowland, dean, University of Maryland Medical School; John Ruhräh, professor of pediatrics; Charles F. Blake and Julius Friedenwald. Dr. Gardner

in 1885 graduated from the College of Physicians and Surgeons, Baltimore, now a part of the University of Maryland.

Stillbirths in Maryland.—Recent statistics indicate that of the total of 31,271 births reported in Maryland during 1931, 1,966, or 6.3 per cent of the infants, were born dead. One source of information stated that this number probably represents but a fraction of the actual number of infants still-born in a year, as some cases probably are not reported. Figures for the state last year show one stillbirth for every fifteen live births, or a rate of 67.1 per thousand live births. The infant mortality for Maryland for 1931 shows that one of every twelve children born alive died during its first year of life, or a rate of 79.6 per thousand live births. The ratio of stillbirths to live births is higher among the Negro population than among the white, the 1931 rates being 100.4 per thousand live births for Negro infants and 57.9 for white. The stillbirth rates for the individual counties range from 140.9 per thousand live births in Talbot County to 30.5 in Garrett County, with a median rate of 70.8. Maryland is the only state that requires the registration of "all products of conception."

MASSACHUSETTS

License Restored.—At a meeting of the state board of registration in medicine, April 14, it was voted to restore to Dr. Charles Grapek his license to practice medicine in Massachusetts. The license had been revoked, April 2, 1931 (THE JOURNAL, May 23, 1931, p. 1804).

Dr. Hubbard Honored.—Dr. Frank A. Hubbard, for more than fifty-two years a practicing physician of Taunton, was given a dinner, April 6, on the occasion of his eightieth birthday. A silver pitcher and tray were presented to Dr. Hubbard by William H. Reed, editor of the Taunton Gazette. Dr. Arthur R. Crandell, Taunton, presided. The speakers were Hon. Andrew J. McGraw, mayor of Taunton; Mr. Reed, and Drs. William M. Conant, Charles G. Mixter, Philemon E. Truesdale, Ralph C. Larrabee, Zabdiel B. Adams and John W. Bartol.

State Medical Meeting in Boston.—The one hundred and fifty-first meeting of the Massachusetts Medical Society will be held in Boston, June 8-10, with headquarters at the Hotel Statler, under the presidency of Dr. Halbert G. Stetson, Greenfield. The Shattuck lecture will be delivered, Wednesday evening, by Dr. Frank B. Mallory, professor of pathology, Harvard University Medical School, on "Cirrhosis of the Liver." Dr. Samuel B. Woodward, Worcester, will give the annual discourse on "The Story of Smallpox in Massachusetts." Guest speakers on the program will include Drs. Frank H. Krusen, Philadelphia, on "Physical Therapy, An Aid to Routine Medical and Surgical Practice"; George A. Wyeth, New York, "Treatment of Growths by Electro-Surgery"; Irving W. Potter, Buffalo, "Elective Version, with Lantern Slide Demonstration"; Edward J. Rogers, Pittsford, Vt., "Silicosis in Vermont Granite Cutters and Slate Workers," and George P. Muller, Philadelphia, "Mortality of Acute Appendicitis." Medical and surgical clinics will be held at the Boston City Hospital.

MINNESOTA

Society News.—Dr. Harry F. Bayard, Minneapolis, addressed the Hennepin County Medical Society, April 13, on "Diagnosis of Chronic Ulcerative Colitis," and Dr. Morris H. Nathanson, "Pericarditis with Effusion: Treatment with Pneumopericardium."——Dr. Owen H. Wangensteen, Minneapolis, among others, read a paper before the Minnesota Academy of Medicine, May 18, on "Therapeutic Considerations in the Management of Acute Intestinal Obstruction."——The Red River Valley Medical Society was addressed at its April meeting in Crookston by Drs. Henry O. Ruud, Grand Forks, on "Diagnosis and Treatment of Lateral Sinus Thrombosis," and Russell Gates, Minot, "Case Histories and X-Ray Diagnosis."

MISSOURI

Tanned with Identical Numerals.—The use of artificial light rays to tan new-born babies and their mothers with identical numerals was adopted at the General Hospital, Kansas City, April 9. The tanning of baby and mother is done before the mother or child is taken from the delivery room, thus eliminating any chance of error in infant identification. The numerals remain visible for about ten days.

State Medical Meeting in Jefferson City.—The seventy-fifth annual meeting of the Missouri State Medical Association will be held in Jefferson City, May 23-26, with headquarters at Junior College, under the presidency of Dr. John F. Harrison, Mexico. The program will include symposiums on diseases of the kidney, carcinoma of the breast, syphilis, diseases of the ear, nose and throat. Guest speakers will include Drs. Edward H. Cary, Dallas, Texas, President, American Medical Association, on "Relation of the Modern Doctor to the Public"; Burton J. Lee, New York, "Indications for Surgery and the Indication for Irradiation in the Treatment of Cancer"; Elexious T. Bell, Minneapolis, "A Clinical and Pathological Study of Primary Hypertension"; William S. Middleton, Madison, Wis., "Syphilis of the Circulatory System." Other speakers on the program include Drs. Martin Hayward Post, Jr., St. Louis, "Incipient Cataract: Its Incidence and Care"; Arthur L. Anderson, Springfield, "Value of Routine Basal Metabolism in the Examination of Patients"; Benjamin Landis Elliott, Kansas City, "Diagnosis of Cerebellar Disease"; Edward Sanborn Smith, Kirksville, "Problem of the Narcoleptic"; Lloyd B. Clinton, Carthage, "Pediatric Surgery," and John F. Chandler, Oregon, "Dispensing as an Art." The twenty-fourth annual meeting of the Missouri Society of Medical Secretaries will be held, Wednesday. Among others on the program will be Dr. Edward J. Goodwin, secretary, state medical association, who will present a report on legislation.

NEBRASKA

Study of Intestinal Allergy.—The University of Nebraska College of Medicine was recently given a research fund of $1,500 by Merrell and Company of Cincinnati for a special study of the flora of the intestine of individuals suffering with allergy. The work is being carried out by Dr. Charles P. Baker, under the supervision of Dr. John T. Myers, professor of bacteriology and public health, and Dr. Ernest L. MacQuiddy, who is in charge of the allergy work of the university.

Fifty Years in Practice.—The Thayer County Medical Society gave a dinner in honor of Dr. Charles C. Snowden, Davenport, April 21, in recognition of his completion of fifty years in the practice of medicine, all of which time has been spent in Davenport. Dr. Harry J. Newell, Alexandria, spoke in behalf of the medical society; Dr. Harry E. Potter, Fairbury, in behalf of friends, and Dr. Edward W. Rowe, Lincoln, on the advances in medicine during the last fifty years. Dr. Miles J. Breuer, Lincoln, spoke on "Types of Anemia That Do Not Respond to Standard Methods of Treatment."

NEW JERSEY

Illegal Practitioners Prosecuted.—The following persons were recently prosecuted by the state board of medical examiners for practicing medicine without a license:

Sarah E. Wilson of Pitman.
Carmelo Cerina, a bone setter of Glassboro.
Ernest Palmaffy, naturopath of Newark.
Maria Capra, midwife of Union City.
Robert C. Bieri, electrotherapist, Union City.
Michael Palazzi, chiropractor, Netcong.
Albert R. Korhnack, electrotherapist of Gloucester.
Anna Fazekas of Franklin.
Voorhees G. Cheathem, licensed chiropractor of Plainfield, was convicted of practicing medicine without a license. He exceeded his chiropractic license by giving electrical treatments.
Abraham E. Sandman, electrotherapist, Atlantic City.
John F. Johnson, Atlantic City.
Frederick S. Fennel, licensed chiropractor, Morristown. He exceeded his chiropractic license by giving electrical treatments and drugs.
Mary Miller, licensed chiropractor, Paterson. She exceeded her chiropractic license by giving electrical treatments and drugs.
Nancy Kehoe. She gave electrical treatments under direction of Mary Miller, D.C., by whom she was employed as a nurse.
Wilbur Leib, druggist of Cape May.
Beverly R. McPhail, druggist, Maywood.
Dr. Krakor Tekian, Newark.

NEW YORK

Health at Utica.—Telegraphic reports to the U. S. Department of Commerce from eighty-five cities with a total population of 37 million, for the week ended May 7, indicate that the highest mortality rate (23.4) appears for Utica, and the rate for the group of cities as a whole, 11.8. The mortality rate for Utica for the corresponding period last year was 21.9, and for the group of cities, 12.1. The annual rate for eighty-five cities for the eighteen weeks of 1932 was 12.5, as against a rate of 13.6 for the corresponding period of the previous year. Caution should be used in the interpretation of weekly figures, as they fluctuate widely. The fact that some cities are hospital centers for large areas outside the city limits, or that they have a large Negro population, may tend to increase the death rate.

New York City

Society News.—Dr. Jacques W. Maliniak was elected president of the recently organized Society of Plastic and Reconstructive Surgery.——A symposium on the common cold constituted the meeting of the Medical Society of the County of

New York, April 25; the speakers were Drs. Alphonse R. Dochez, Anna W. Williams, Harlow Brooks, Marcus A. Rothschild, Joseph Harkavy and Samuel J. Kopetzky.

Medical Center to Open September 1.—The New York Hospital-Cornell University Medical Center, covering three entire blocks along the East River between Sixty-eighth and Seventieth streets, which has been under construction since the autumn of 1929, will open September 1. The present New York Hospital, the Lying-In Hospital and the Manhattan Maternity and Dispensary will close their present plants about August 1 to move into the new center. Cornell University Medical College will begin to move at the end of the present school term in June and will open the fall term in the new buildings, September 29. More than half of the 1,000 beds in the hospital will be ready for occupancy at the outset.

Personal.—In recognition of forty years of service to the University and Bellevue Hospital Medical College, colleagues of Dr. William J. Pulley, clinical professor of medicine, gave a dinner in his honor, April 23.——Dr. Richard T. Atkins was appointed professor of otolaryngology at University and Bellevue Hospital Medical College, it was announced, April 25; Dr. Lee M. Hurd was appointed emeritus professor of laryngology, and Dr. John McCoy, emeritus clinical professor of laryngology.——Dr. Phoebus A. Levene, member of the Rockefeller Institute for Medical Research, has been elected a member of the Deutsche Akademie der Naturforscher in Halle, on the occasion of the celebration of the centenary of the death of Goethe.

Public Psychiatric Service.—Results of the first year of the psychiatric service of the city department of health in the Bellevue-Yorkville Health Demonstration are disclosed in the 1931 report of the demonstration. This is the first complete mental hygiene unit established by the department; it was opened in November, 1930; last year 141 patients were treated. The objectives are to carry out an educational mental hygiene program and to be of service to patients referred by physicians or nurses in the health center clinics. The educational work has been carried on by means of group discussion meetings every two weeks and by individual conferences with nurses. The direct service to the patients has necessitated cooperation with a large number of social agencies and with district schools.

OHIO

Personal.—Dr. James H. Park has been appointed health officer of Ashtabula, succeeding Dr. Azro J. Pardee, resigned. ——Dr. Floyd S. Meck, Cleveland, was appointed a member of the state board of medical examiners, April 21, to succeed Dr. Thomas H. George.

State Medical Election.—Dr. Herbert M. Platter, Columbus, was installed as president of the Ohio State Medical Association at its recent annual meeting; Dr. Clyde L. Cummer, Cleveland, was made president-elect; Dr. James A. Beer, Columbus, treasurer. Don K. Martin, Columbus, is the secretary.

Medical Alumni Reunion.—The alumni of the University of Cincinnati College of Medicine will hold its annual medical reunion, June 10. Friday and Saturday mornings, June 10-11, the hospitals of Cincinnati will provide clinics to demonstrate technic, unusual cases and methods of diagnosis. The golf tournament will be held Friday afternoon. A feature of the annual banquet this year will be the silver anniversary reunion of the class of '07, and the golden anniversary of the class of '82. Dr. Dudley W. Palmer is president of the Alumni Association, and Dr. Robert H. Kotte, secretary.

PENNSYLVANIA

Hospital News.—The new $100,000 nurses' home and training school of the Delaware County Hospital was dedicated, April 24. The three-story brick building is the gift of Mrs. May F. Fitzgerald, Lansdowne, in memory of her husband, the late Thomas M. Fitzgerald.

Health Survey in Delaware County.—A resolution was adopted at the March meeting of the Delaware County Medical Society requesting the U. S. Public Health Service to conduct a health survey of the county. As set forth in the resolution, this survey would better provide for the present and future health of the citizens of Delaware County, create and build effective methods of combating and preventing epidemics of disease, obtain the maximum of coordination and efficiency from individuals and the voluntary health agencies, obtain accurate information on all matters pertaining to the public health, and prevent and correct overlapping of individual and organized effort.

Society News.—The Pennsylvania Safety Conference was held at the Penn-Harris Hotel, May 12-13, in Harrisburg. Included among the speakers were Dr. Alice Hamilton, Boston, on "Industrial Poisonings in Pennsylvania," and John B. Andrews, Ph.D., New York, "Legislation for the Prevention of Occupational Disease." "A Year of Safety" and "Occupational Diseases" were topics for discussion at this meeting also. ——Dr. George G. Ornstein, New York, addressed the Cambria County Medical Society in Cresson, May 12, among others, on "Diagnosis and Treatment of Pulmonary Tuberculosis."—— Dr. Willis F. Manges, Philadelphia, addressed the Eleventh Councilor District Medical Society, May 19, on "Relation of Sinus Infection to Pulmonary Diseases."——The Delaware County Medical Society was addressed, May 12, by Drs. Ezra A. Whitney and Horace H. Hunsicker, Elwyn, on "Studies in Epilepsy with Emphasis on Dehydration."—— Mental hygiene and child health was the general topic for discussion before the Allegheny County Medical Society, May 17, in Pittsburgh; the speakers were Drs. Charles H. Henninger and Theodore O. Elterich.——Dr. Charles Howard Marcy addressed the Erie County Medical Society in Erie, May 3, on "Collapse Therapy in the Treatment of Pulmonary Tuberculosis."——The Crawford County Medical Society was addressed in Meadville, May 9, by Dr. Joseph H. Barach, on "Focal Infection."

Philadelphia

Society News.—Dr. Robert Tilden Frank, New York, will address the Philadelphia County Medical Society, May 25, on "The Hormones Controlling the Sex Functions in Women."

Hospital News.—The Woman's Hospital of Philadelphia opened the first unit of its new building, April 13. It contains the laboratories and also private and ward floors. The second unit will be completed in June, at which time the hospital will be able to accommodate 160 patients. This hospital is a result of the merger of the Woman's Hospital of Philadelphia, established in 1861, and the West Philadelphia Hospital for Women, established in 1889. Both institutions were managed by women, and had staffs of women physicians. Their services are available for women and children only and the institution will be carried on along the same lines.——A new surgical ward was opened at St. Luke's and Children's Homeopathic Hospital, April 4, the gift of the junior auxiliary of the hospital association.

SOUTH CAROLINA

State Medical Election.—Dr. James R. Young, Anderson, was installed as president of the South Carolina Medical Association at its recent annual meeting in Columbia. Dr. Robert E. Abell, Chester, was made president-elect, and Dr. Edgar A. Hines, Seneca, was reelected secretary. The next annual session of the association will be held in Spartanburg.

Society News.—Drs. Paul H. Ringer and William Pinkney Herbert, Asheville, N. C., addressed the Columbia Medical Society, recently, on treatment of tuberculosis.——Dr. Charles H. Young, Anderson, addressed the February meeting of the Anderson County Medical Society on diseases of the thyroid gland.——Dr. George R. O'Daniel has been appointed health officer of Dorchester County.——The South Carolina-Savannah Valley Medical Society, comprising the counties of Allendale, Hampton and Barnwell, was recently formed. Dr. G. W. I. Loadholt, Fairfax, was made president, and Dr. Herbert A. Gross, Barnwell, secretary.——Dr. John B. Setzler, Columbia, health officer of Richland County, was elected president of the South Carolina Public Health Association, April 19, succeeding Dr. Hugh B. Senn, Beaufort.

UTAH

Personal.—Dr. Louis E. Viko was recently appointed health officer of Salt Lake City, succeeding Dr. Willard Christopherson, who has returned to private practice. Extension of departmental activities in the board of health is being planned, especially in the fields of tuberculosis and child hygiene. The department is also preparing a revised sanitary code and a revised foods code for submission to the city commission.

Joint Program to Limit Tuberculosis.—Plans announced at the annual meeting of the Utah Tuberculosis Association, April 28, indicate that the association and health department of Salt Lake City will cooperate with other agencies in a program to improve the care and limit the incidence of tuberculosis. The plans, as outlined in an address by Dr. Louis E. Viko, health commissioner of Salt Lake City, provide that the tuberculosis association will furnish part of the time of its nurses to the city health department for the purpose of doing tuberculosis follow-up nursing in the city. It is understood

that this is a demonstration by the tuberculosis association, rather than a permanent arrangement. Necessary records will be kept in the health department by the tuberculosis nurse. Cases of tuberculosis reported to the health department will be referred to the tuberculosis nurse, who will contact the reporting physician to secure his permission and instructions for aiding in the isolation and proper care of the cases.

GENERAL

Courses in "Sight-Saving."—To prepare teachers and supervisors of children having seriously defective vision, summer courses will be offered by four universities, in cooperation with the National Society for the Prevention of Blindness, as follows:

University of Cincinnati, Cincinnati, June 18-July 26.
University College, University of Chicago, Chicago, June 27-August 5.
Teachers College, Columbia University, New York, July 5-August 12.
State Teachers College, Buffalo, July 5-August 12.

Information concerning these courses may be secured from the respective universities or from the National Society for the Prevention of Blindness, 450 Seventh Avenue, New York.

American Association for the Study of Goiter.—The annual meeting of the American Association for the Study of Goiter will be held in Hamilton, Ont., June 14-16. Dr. Marcus O. Shivers, Colorado Springs, Colo., will give the presidential address on "Prophylaxis in Diseases of the Thyroid Gland." Speakers on the program will include Drs. Charles H. Mayo, Rochester, Minn., on "The Past and Possible Future of the Thyroid Gland"; Andre Crotti, Columbus, Ohio, "Etiology of Endemic Goiter—Rabbit Experimentation"; James B. Collip, Montreal, Que., "Physiology of the Parathyroid Gland"; Lewellys Barker, Baltimore, "Relationship of the Sympathetic System to Thyroid Disease," and Gordon S. Fahrni, Winnipeg, Manit., "Management of Hyperthyroidism Associated with Other Diseases." Announcement of the winner of the annual prize award essay contest will be made at this meeting.

Health Authorities of North America.—The State and Provincial Health Authorities of North America will hold its forty-seventh annual conference at the Willard Hotel, Washington, D. C., June 2-6. Dr. Theodore B. Beatty, state health commissioner of Utah, is president of the conference. Among the speakers at this meeting will be Dr. Wilson G. Smillie, professor of public health administration, Harvard School of Public Health, Boston, on "Field Studies in Common Colds"; Dr. Malcolm R. Bow, deputy minister of health of Alberta, Canada, "Health Work in Alberta"; Dr. Theodore B. Appel, secretary of health, state department of health, Pennsylvania, "Stream Pollution Control and Water Conservation"; Drs. Polk Richards and Len L. Culp, Minneapolis, "Trachoma," and W. F. Walker, D.P.H., of the American Public Health Association, "Appraisal of Rural Health Work." Meeting simultaneously with this group will be the health officers with the U. S. Public Health Service.

Revised Standard for Clinical Thermometers.—A recommended revision of the commercial standard for clinical thermometers was circulated, February 24, for acceptance by those participating in the conferences, chiefly representatives of manufacturing interests. Acceptances have been received representing a satisfactory percentage of production, an announcement states. The bureau of standards, U. S. Department of Commerce, has indicated that, in accordance with the recommendation of the standing committee, this revision of the commercial standard, to be known as CSI-32, will become effective June 1. The bureau states further: those who were active in drafting this specification believe that although it is not an excessively high standard, in that manufacturers should experience no great hardship in meeting its requirements, it does insure thermometers that meet the ordinary demands of accuracy and reliability. Furthermore, they believe that thermometers which fail to pass the required tests are inferior and unsuitable for clinical use. It is expected, the announcement continues, that these standards will be followed as far as circumstances permit.

Medical Bills in Congress.—*Changes in Status:* H. R. 4724 has been vetoed by the President, proposing to extend the benefits of hospitalization and the privileges of the soldiers' homes on certain persons who served in the Quartermaster Corps or under the jurisdiction of the Quartermaster General during the war with Spain, the Philippine insurrection, or the China relief expedition. President Hoover said, in part: "I cannot concur in a proposal to single out one class of civilian employees who served during certain periods of hostilities and confer upon them a right to the benefits of hospitalization and domiciliary care provided by law for veterans of our wars. Such proposal would be establishing a precedent which, in all justice, would call for similar legislation in behalf of other civilians. It would ultimately involve the government in hundreds of millions of expenditures by the usual accretions of wider spread inclusions of new and borderland groups." Hearings were begun, May 12, by a subcommittee of the Senate Committee on the Judiciary, on S. 4436, a bill introduced by Senator Hatfield to amend the existing law relating to the dissemination of information and devices for the prevention of conception. *Bill Introduced:* S. 4547, by Senator Copeland, New York, to extend to June 30, 1933, the period within which application may be made for retirement under the Disabled Emergency Officers' Retirement Act.

Biologists Thank Mayor and City Council.—More than 500 members of the Federation of American Societies for Experimental Biology meeting in Philadelphia signed a letter of thanks, which was presented to Mayor Cermak of Chicago, in person, May 4, by Prof. Anton J. Carlson of the University of Chicago. The members of the society expressed their appreciation of the services of the mayor and city council of Chicago in insuring a continuance of medical research in the reputable medical schools and laboratories of that city, which scientific work had been seriously handicapped last July by the efforts of certain individuals and societies opposed to animal experimentation. About that time an ordinance was passed without the knowledge of the universities and laboratories which provided that unclaimed dogs should be disposed of on the premises, thus making it impossible for the laboratories to obtain unclaimed dogs. More recently, however, an amendment was introduced by Alderman Arvey and almost unanimously passed by the city council, which provided that reputable medical schools and laboratories might apply to the president of the city board of health for a certain number of dogs which on his recommendation would be turned over to these laboratories by the chief of police. Although it has been made more difficult, the universities have been enabled thus to continue experimentation. It was for invaluable service in bringing this amendment about that the foregoing letter of thanks was presented to the mayor of Chicago.

Society News.—At the annual meeting of the American Physiological Society, April 29, Dr. Arno B. Luckhardt, Chicago, was elected president, and Dr. Frank C. Mann, Rochester, Minn., secretary. The next annual session will be held at Cincinnati, probably in April, 1933.——The officers for the ensuing year of the American Association of Pathologists and Bacteriologists are Drs. Elexious T. Bell, Minneapolis, president; Oswald T. Avery, New York, president-elect, and Howard T. Karsner, Cleveland, secretary. The next annual session will be held at Washington, D. C., May 2-3.——Dr. G. Canby Robinson, New York, was elected president of the Association of American Physicians at its recent annual meeting, and Dr. James H. Means, Boston, reelected secretary. The next annual session will be held at Washington, D. C., May 2-3.——At the annual meeting of the American Gastro-Enterological Association, May 2, Dr. Burrill B. Crohn, New York, was made president, and Dr. Charles G. Lucas, Louisville, Ky., reelected secretary.——Harold C. Bradley, Ph.D., Madison, Wis., was elected president of the American Society of Biological Chemistry, and Howard B. Lewis, Ph.D., Ann Arbor, Mich., secretary, at the society's annual meeting, April 29. The next annual session will be held in Cincinnati.——Dr. Arthur L. Bloomfield, San Francisco, was elected president of the American Society for Clinical Investigation, May 2, and Dr. Herrmann L. Blumgart, Boston, elected secretary. The next annual session will be held in Washington, D. C. in May.

FOREIGN

Dr. Mellanby Given Prize.—The Cameron Prize of the faculty of medicine of the University of Edinburgh has been awarded to Dr. Edward Mellanby, professor of pharmacology, University of Sheffield. The prize is given for additions to practical therapeutics.

Society News.—The annual congress and exhibition of the Royal Sanitary Institute of England will be held at Brighton, July 9-16.——The International Congress Against Rheumatism, which was to have been held in Rome in May, has been postponed indefinitely in view of the present economic condition.——Lord Moynihan, London, will deliver the Romanes lecture for 1932 at the University of Oxford, June 1. His subject will be "The Advance of Medicine."——The Royal Institute of Public Health held its annual congress in Belfast, May 10-16. Discussions were grouped under state medicine and municipal hygiene; industrial hygiene, women and children and the public health; tuberculosis, and pathology, bacteriology and biochemistry.

Foreign Letters

LONDON

(From Our Regular Correspondent)

April 23, 1932.

The Menace of Complete Medical Socialism Passes

The growth of medical socialism in England, in the form of the various free clinics for maternity and child welfare, tuberculosis and venereal diseases and in the National Health Insurance Acts, has often been commented on in previous letters to THE JOURNAL. Finally came, two years ago, the scheme of the British Medical Association of a medical service to be provided by the state for all. This scheme was produced not because of any desire of the profession or of the Association for complete medical socialism but as a lesser evil than some scheme which might be foisted on the profession by the socialist government then in office. With the crushing defeat of the socialist party when the country began to realize the ruin threatened by their prodigal expenditure, the menace of complete medical socialism has passed for the time, but it remains a possibility of the future. At the Paddington Medical Society an interesting debate took place on "A State Medical Service," which means complete medical socialism. The protagonists of all parties took part. Mr. Somerville Hastings, laryngologist and member of parliament, who may be regarded as the leader of the socialist party in the medical profession, opened the debate. He desired that everybody, without consideration of ability to pay, should receive in illness the best attention which medical science could give. He also wanted more preventive medicine. He regarded the scheme of the British Medical Association as a useful step in the right direction, but he wanted to go further—to have a complete state service, complete, unified and free. He did not want compulsion for either patient or physician, but a service so good that people would readily avail themselves of it. He thought that such a scheme should appeal to the medical profession, for it was the most socialistic of all the professions. Physicians' discoveries were by tradition broadcast to the world, and their charges were made according to the means of their patients. A desirable extension of the latter principle was that people should pay for medical services not in hard cash but in rates and taxes based on individual means. During the last fifty years the general practitioner had been continuously robbed of clinical material and of interest in his work. One group of diseases after another had been taken from him. He might diagnose an infectious disease, but its treatment was carried out in a fever hospital. Venereal diseases were treated largely in clinics, and the treatment of school children has been taken from him. In 1927 the *British Medical Journal* said: "There are no fewer than seventeen departments of clinical activity for which provision is made in this sectional way under the auspices of the local authorities." Further, as soon as a patient entered the hospital the general practitioner lost all contact with him, and the complexity of the modern treatment of disease necessitated that patients would increasingly go to the hospital. Municipal hospitals were developing side by side with the voluntary hospitals and, because of the financial backing of the state, were becoming formidable rivals. It was the spirit of the age to provide for the needs of the community by cooperative means. There was a strong case for the treatment of all sorts of disease in special clinics—rheumatism, orthopedic conditions, heart disease in children and even cancer. But more coordination was needed so as to insure that the patient fell into the right compartment. In his view the general practitioner was needed for every family, and for him to be excluded from many of the medical schemes was a disaster. Medical research was now confined to the big hospitals. If the profession were unified it could take part in it and produce better results.

Sir Ernest Graham Little (dermatologist and member of parliament) led the individualist opposition. Mr. Hastings had not described what sort of general practitioner the socialist scheme envisaged. Did it contemplate the sort of practice now known as insurance or panel? Under it the choice of physician and place to go for treatment were taken from the patient, but the British public could not be forced to go where they did not want to go. A state medical service would not be conducive to the progress of medicine but to standardization, for a state possessed neither soul nor mind. Loss of independence and of competition were serious drawbacks. Moreover, the cost would be prohibitive. What was the great advantage of the voluntary hospital system? Mr. Hastings admitted that most of the research had been done there. What distinguished it from state-controlled institutions? First, individual management. How much better was their status than that of the municipally managed hospitals? Economy would certainly not be secured by handing them over to government management.

Dr. G. C. Anderson, deputy-medical secretary of the British Medical Association, did not agree with either of the previous speakers, but he went further with the socialistic idea, because now that the state had provided a medical service for the country, he felt sure that it would be extended. The British Medical Association had sketched out a complete scheme, not because it imagined that the socialist government (in power at the time) would introduce a whole-time state medical service, but because it feared that the developments which were going on might proceed on wrong lines, by an extension of the "clinic" rather than of the "panel" system. What was wrong with the insurance system was its limitations; but it was out of the question to revert to the previous order of things. He wanted the insurance physician to have further opportunities for extending his knowledge by contact with the hospitals in his area. In all its negotiations with the government the association had tried to make insurance practice approximate as closely as possible to private practice.

Proposal to Abolish the Patenting of Discoveries

The council finds that the present state of the law with regard to patenting discoveries is unsatisfactory. The view generally held in this country is that discoveries for the treatment of disease should not be patented but available to every one to use for the benefit of humanity. But this voluntary abstention from patenting has the result that British medical research may be exploited in other countries and patented in this country. This has occurred in the case of vitamin D. By means of British research it was produced in a potent form by ultraviolet irradiation of ergosterol. But when our manufacturers wanted to apply the discovery, a British patent, granted to Professor Steenbock of Wisconsin, was found to be an obstacle. The council says that this patent is founded on the earlier and unpatented discoveries of other workers, particularly British, and holds that it is unreasonable that Professor Steenbock should be able to control the results of so much previous and subsequent work. It seems that he has transferred his rights to the University of Wisconsin and that these rights are granted in respect of a somewhat vague process for the irradiation of any foodstuffs. The council's remedy is to abolish the patenting of therapeutic discoveries entirely, as has been done in some countries. A previous attempt was made to get over the difficulty by a proposal for the compulsory dedication in the public interest and under state administration of all therapeutic discoveries. But a committee appointed by the board of trade to consider the matter would not agree to this. They found that medical opinion was not unanimous on the undesirability of patenting. It was suggested that it was not ethically worse to reward research that reduced human suffering than to pay a surgeon a fee. Moreover, some manufacturing chemists urged that the proposed restriction would discourage research and encourage secrecy as a method monopoly. In the end, the committee decided against com-

pulsory dedication because it would operate adversely on British industry and discriminate against British research workers.

Irish Hospitals and Sweepstakes

The immense sum, mostly from other countries, derived by the Irish hospitals from sweepstakes has aroused attention in England to this method of raising money, which at present would be illegal. In the House of Commons the home secretary, Mr. Samuel, stated that there had been five of these sweepstakes between November, 1930, and March, 1932, and the public in the United Kingdom and throughout the world had subscribed to them no less than $69,000,000, of which they had received back in prizes $38,500,000. The expenses and commissions of the sweepstakes involved an expenditure of $16,500,000, and out of the total sum subscribed the Irish hospitals received $14,000,000. As far as Great Britain was concerned, calculation showed that her people had subscribed $47,500,000 and received back in prizes $25,000,000. The commission of sellers of tickets in Great Britain amounted to $8,000,000, and thus there had been transferred from Great Britain to Ireland about $13,750,000. The view has already been expressed that if the British public is willing to supply such a large sum for being allowed to gamble it should be retained for the benefit of the country. The difficulty is the strong feeling against the legalizing of gambling and the obtaining of money for hospitals in this way. However, the sum involved is so large that the home secretary announced in the House of Commons that he was about to appoint a commission to inquire into the subject.

PARIS

(From Our Regular Correspondent)

April 6, 1932.

The Heart and Athletic Training

Professor Vaquez, heart specialist, considered the question as to the effects of intense physical training and of sport activities on the functioning of the heart. He made experiments on the mean arterial pressure, at the special school at Joinville, for the training of athletic instructors in the army, and studied the effects of various forms of exercise on the heart of subjects who had received systematic training. After the 300 meter dash, he measured in many subjects the acceleration of the pulse, the maximum and the mean arterial pressure, and the time required for a return to normal circulatory conditions. He made the following observations:

1. Subjects who have received systematic training have, after a severe test, about the same acceleration of the pulse as subjects who have not had such training. The pulse cannot, therefore, be considered as a sign of aptitude or inaptitude for sport activities. It should be, however, regarded as a suspicious sign if the pulse requires more than five minutes to return to its normal rhythm.

2. The maximum arterial pressure must not exceed 150 mm. of mercury. But one need not consider as a dangerous sign the instability of the pulse after an effort, nor the time required to regain normal frequency. Likewise, one need not be disturbed if the maximum pressure declines for from ten to fifteen minutes after the effort.

3. The mean pressure, which is so important in Vaquez's opinion, must not exceed 110 mm., after the effort, irrespective of the age of the subject. If it is higher than that, radioscopy of the heart should be applied. As for the variations, they must not be more than 30 mm. above normal or from 10 to 20 mm. below normal, whatever the departures from the maximum pressure may be. Undue slowness of the return of the mean pressure to normal is also a bad sign. To sum up, the best characteristic of a good training in subjects with a good constitution is the stability of the mean pressure. Its return to equilibrium after the effort should be immediate, or, in any event, should not require more than two minutes.

Typhoid Infection from Oysters in Paris

The fear of typhoid still prevents many persons from eating oysters. However, the strict regulations adopted, during the past ten years, with regard to the supervision of the oyster beds of France, and the mode of conservation and the method of marketing these mollusks, appear to have had a good effect. Cases of typhoid derived from oysters are now rarely observed, and, if they do occur, the fault lies with the merchants and not with the management of the oyster beds. Professor Tanon and Mr. Neveu examined, between November, 1931, and March, 1932, 550 samples of oysters taken at random from lots offered for sale in the markets of Paris. In none of the various kinds of oysters examined did they find pathogenic organisms. The shells were, however, contaminated with Bacillus coli. Mr. Tanon recommends avoiding a common source of infection that arises from impurities existing on the outside of the shell. It is advisable to wash and to brush the shell carefully, holding it in pure water, before opening the oyster, in order that possible germs may not be carried within the shell by the knife used in opening the oysters. This precaution is always neglected by the small oyster merchants, and by the restaurants of the populous sections of the city, which often have the habit, in order to keep their baskets of oysters fresh, of placing them in running water at the side of the streets, in spite of administrative orders to the contrary. This water, which is designed only for street cleaning purposes, is always contaminated.

Decisions of Council of the Federation of Medical Syndicates

Although the ethical order of physicians has not yet been legally established, the council of the Fédération des syndicats médicaux endeavors to assume such a rôle under all circumstances in which it is possible to intervene. The imposition of indirect penalties has become possible owing to the law pertaining to social insurance. This cannot function except as a result of agreements entered into between the regional health insurance societies and the medical syndicates. It is sufficient, therefore, for the syndicate to declare that a given physician, found guilty of misdemeanors affecting the medical profession, may not be permitted to participate in the care of the socially insured, on pain of revocation of the entire agreement, in which case the syndicate would refuse to care for any of the members insured in the health insurance societies. The latter have tacitly accepted this procedure because they consider that this mode of control exercised by the syndicates over the members constitutes a certain guaranty as regards the character of the physician they employ. The recent meeting of the council of the Fédération des syndicats médicaux furnished several examples of this. The council denied to three physicians, who it declared had failed to conduct themselves in accordance with the duties imposed on them by the ethics of their profession, the right to participate in the care to be given to the socially insured. One of them, the director of a clinic, allowed himself to be assisted by a foreigner who not only had no French diploma but had falsely assumed the title of "doctor." A second physician was connected with a chiropractic institute where all he did was to sign the prescriptions of a person who treated all the patients by a peculiar method, although he held no medical diploma. The third physician was found guilty of having, for some undetermined disorder of no significance, during two consecutive months, applied ultraviolet rays and daily subcutaneous injections to a patient. During the past three months, 116 complaints against physicians were addressed to the council, but only 46 of these appeared well founded; the others were manifestly without foundation. As a result of this inquiry, fourteen formal complaints against these confrères were sent to the prefect of the Seine, and in addition fourteen reproofs or warnings were addressed to the physicians in question. Fifteen further cases

are being inquired into. The present active control exercised by the council over the members of the federation is sure to have a favorable effect on parliament and will serve to hasten the enactment of the law establishing the ethical order of physicians. The physicians are not obliged to become affiliated with the syndicates, and, in spite of the various advantages that they derive from such affiliation, about one fourth of the physicians of the department of the Seine are not enrolled.

Creation of a Blood Transfusion Center

Under the influence of a committee of women of the old aristocracy and of the newer, rich bourgeoisie, a permanent service has been created at Paris, in the Hôpital St. Antoine, where persons ready to furnish blood for emergency transfusions are at the disposal of patients at any hour of the day and night. The service has developed from 220 transfusions in 1929 to 779 in 1930 and to 2,038 in 1931, the transfusions having been given in the 178 different services of the 31 hospitals of the Assistance publique. The chief event of the past year has been the creation of a permanent center at the Hôpital St. Antoine. The services of the center are available at any hour of the day or night. The secretary assures prompt service with the aid of a list of immediately available physicians ready to do blood transfusion, and a complete list of blood donors. Furthermore, there is always a donor present for extremely urgent cases. In response to a telephone call, the physician and the donor will arrive in a few minutes in an automobile, which makes it possible to save many a life menaced by a sudden hemorrhage. Also small repeated transfusions are given, and, as Professor Gosset explained in his address delivered at the opening of the center, this movement includes also a center for scientific research. Owing to recent research, immunotransfusion has been used in the treatment of such diseases as typhoid and septicemias.

BERLIN

(From Our Regular Correspondent)

April 4, 1932.

Observations on Bromine in the Blood of Mental Patients

Prof. H. Zondek announced in an address delivered before the Berliner Medizinische Gesellschaft that he believes that he has found new and promising ways of treating certain mental diseases. Through skilful combination of chemical, physiologic, anatomic and clinical observations, Zondek became convinced that changes in the bromine content of human blood play a part in cyclic insanity or in manic-depressive conditions. In such cases, he found a considerable diminution of the bromine content of the blood. He successfully treated forty cases of melancholia with small quantities of bromine. This remarkable announcement awakened great interest. Zondek stated that he discovered in the hypophysis a bromine-containing hormone, from which he produced a preparation soluble in water. In experiments on the dog, one can reduce the motor power with this hormone and induce fatigue and apathy. The manner in which this hormone acts on mental patients must be carefully investigated. But even at this stage Zondek feels that he is justified, on the basis of his observations, in advancing a new theory of sleep. In the course of his experiments, he, in collaboration with Arthur Bier, found that with the onset of sleep a shifting of the minute quantities of bromine within certain parts of the brain takes place; for example, in the medulla oblongata, bromine is activated. It develops again in the hypophysis, which with the onset of sleep throws its bromine into the brain fluids. When the sleep is ended and the waking condition is restored, this transference of bromine ceases. The gland begins again to produce and to store up bromine, in order to pour out its hormone again when sleep is renewed. This is certainly a masterful idea. What measure of truth it contains will require long and thorough experiments. Unfortunately, as so often happens, the daily press obtained a report of the lecture and is publishing the statements of Zondek with varying degrees of accuracy, depending on its attitude, and with or without a picture of the speaker. Sensational presentation is not compatible with scientific research.

Professor Sauerbruch on Traumatic Surgery

At the invitation of the Verein der Berliner Vertrauensärzte, Professor Sauerbruch delivered in his clinic in the Charité Hospital an address on the surgery of accidental injuries and the determination of the degree of disability. At the universities, advances in abdominal and thoracic surgery have forced surgery of the extremities somewhat into the background. A baneful effect on the surgery of accidents is brought about by roentgenologic surgery, because it leads to a neglect of clinical surgery. The trained physician can diagnose every typical luxation or fracture with the aid of his senses. The roentgenogram should serve only purposes of control. As a basis of diagnosis and treatment the roentgenogram easily leads to serious errors, since important secondary injuries, such as paralysis of the nerves, may be overlooked. The physician must be so trained in the clinic that he can diagnose with eye and hand and does not need to rely on the roentgenogram.

For the outcome of accidents, importance attaches to the psychic influence of the physician who first treats the injured person. Sauerbruch's many years of experience in Zurich, where he formerly held the chair of surgery, proved to him that the results following accidental injuries are better in Zurich than in Berlin; not that it is to be assumed that the physicians there are better but that it is better for the injured person to receive a single lump sum in the adjustment of compensation than an annuity. The physician, the patient and the central government have a common interest in freeing social insurance from the influence of the bureaucracy. To concentrate the treatment of accidents in a few special "accident hospitals," Sauerbruch regards as dangerous, because the treatment of accidents loses through such concentration all touch with general surgery. The adjustment of compensation claims is an art and not a bureaucratic affair. It requires an extensive experience with all classes of patients, which can be acquired only in general hospitals. For that reason, the general practitioner should not be eliminated in the treatment of injuries due to accidents, or in the determination of the amount of compensation to which the injured are entitled.

When Should the Tonsils Be Removed?

The question as to whether diseased tonsils should be removed is a common one; especially patients who suffer frequently from sore throat ask to have the tonsils removed. The relatively simple intervention causes certain eventualities to be forgotten that should not be lost sight of, but which are often ignored owing to the influence of modish tendencies in medicine Frequently, disorders of remote organs or even general diseases have their origin in the tonsils, which complicates the question considerably. Prof. O. Bruhns, director of the Medizinische Universitäts-Poliklinik in Königsberg, in the *Deutsche medizinische Wochenschrift,* states his opinions on the subject.

The routine removal of the tonsils solely on account of chronic inflammation is contraindicated. This operative intervention is advisable only when the tonsils show a predisposition to disease, which leads to ever recurring attacks, or when internal disorders appear in association with inflammation of the tonsils. In any event, one should wait from four to six weeks with the intervention after disappearance of the acute pathologic manifestations, for then the danger of immediate recurrences is slight. The danger is much greater if one operates immediately or during the acute febrile stage. Then, too, recurrences are more easily avoided with late than with early operations. An early operation should be undertaken only when the disease of internal organs, which originated in the

tonsils, is continually flaring up anew or when there is danger that a septic condition may result. It is unquestionably true that complications sometimes arise in association with the removal of tonsils. Pneumonia, sepsis, suppurations of the throat, and still more threatening conditions have been observed. Hence every case must be judged on its own merits.

ITALY

(From Our Regular Correspondent)

March 15, 1932.

Professor Pianese, the New Academician

Prof. Giuseppe Pianese, professor of anatomy and pathologic histology at the University of Naples, was recently appointed academician of Italy. Pianese was born at Civitanova del Sannio in 1864, and his teaching and scientific career has been confined to the Istituto di anatomia patologica at Naples, where he became professor extraordinarius in 1903 and director in 1917. He is passionately fond of microscopic technic. During his forty years of activity, he has devoted himself to the solution of problems of general biology, normal histology and pathology. In the field of bacteriology may be mentioned his research on Bacillus anthracis. He studied the development of Coccidium oviforme. In the opinion of the Boston Commission, these last researches have thrown light on the question of the biology of the coccidium and on the lesions that this parasite causes in the liver. From 1894 to 1899, Pianese stood almost alone in contending that the so-called cancer bodies were not coccidia but products resulting from changes in the protoplasm, the nucleus and the plasmosome. He demonstrated that blastomycetes do not produce cancer or sarcoma but granuloma. His research found universal confirmation. Pianese was the first to support the infectious nature of Sydenham's chorea, and his name is connected particularly with the discovery that infantile splenic anemia, a disease that is widespread in southern Italy, is produced by a protozoan.

Nonvenereal Ulcers of the Female Genitalia

Addressing recently the Associazione medica Triestina, Professor Freund discussed the various forms of nonvenereal ulcers of the female genitalia. He considered recent research on certain cutaneous manifestations that not infrequently are associated with ulcus vulvae acutum; for example, erythema nodosum. This research led to the discovery by Samek, of the Clinica Kreibich in Prague, that Bacillus crassus, which is the etiologic agent of ulcus vulvae acutum, is found not only in ulcers of the genitalia but also in cutaneous lesions and even in the circulating blood.

Dr. De Grisogono referred to several tuberculous ulcers: herpes genitalis menstrualis, which may appear other than during the menstrual period; vulvar furunculosis, which, while it is not a pyodermitis peculiar to the external genitalia, nevertheless may assume peculiar characteristics when it occurs on that part of the body. He mentioned ulcers that may appear in the course of such diseases as diphtheria, dysentery and typhoid. Although rare, vulvar diphtheria may appear also in children immune to diphtheria of the throat. Ulcus vulvae acutum of Lipschütz, aside from the presence of B. crassus and its typical location on the inner surface of the labia minora, is characterized by a grayish yellow color at the base, which presents also numerous minute nodules, and which is bordered by undermined and arcuate edges. The inguinal glands, different from all other ulcerative processes, are rarely swollen. Schugt, however, from an accurate study of a case complicated with ulcers of the mouth and tongue, is inclined to question the specificity of B. crassus and thinks that an angioneurotic gangrenous process, with secondary invasion of B. crassus, is involved. As to ulcus vulvae chronicum and its etiology, there are many theories. In addition to syphilis and tuberculosis, constitutional factors have been incriminated; also local circulatory disorders and chronic inflammatory processes. Histologic research reveals only chronic inflammatory conditions and parvicellular infiltrations, sometimes with giant cells of unknown or doubtful origin.

Professor Gacchia remarked that from the case cited by Professor Freund, in which B. crassus was cultivated from ulcers of the female genitalia and from tissue excised from a simultaneous erythema nodosum, one cannot deduce an analogous etiology for the frequent cases of nodular erythemas in persons of the two sexes, since nonvenereal ulcers due to B. crassus are rare and found only in women. Professor Freund replied that the erythema nodosum was observed not only in several cases of ulcus vulvae acutum (Lipschütz) but also in many other infectious disorders, the most peculiar observation being an erythema nodosum containing the Ducrey bacillus following an infection with soft ulcers.

The Novara Medical Society

The Società di cultura medica of Novara met recently in that city, under the chairmanship of Professor Pietra. Dr. Borrella spoke on subserous cholecystectomy, which he regards as the best method of intervention on the gallbladder. During 1931, in the department of surgery, under the direction of Professor Ferrero, of nineteen cases, seventeen were subjected to intervention by the subserous route, with 85 per cent of favorable results. The method presents advantages over the ordinary transperitoneal method.

The Inaugural Address of Professor Bastai

Professor Bastai, recently appointed to a chair of pathology at the University of Florence, delivered recently the inaugural lecture of his course, taking as his subject "Anemia Due to Lack of Hormones." He discussed the pathogenesis of pernicious anemia and of chlorosis, considering the latter to be due to ovarian insufficiency and the former to be in relation to changes in endocrine functioning affecting the stomach. The treatment of this subject awakened particular interest, since the pathogenesis of pernicious anemia, as outlined by Professor Bastai, was based on the observation of the efficacy in this disorder of liver and stomach extracts.

In Honor of Professor Economo

At a recent session of the Associazione medica Triestina, memorial exercises were held in honor of Prof. Costantino Economo. Professor Sai, director of the Istituto provinciale neuropsichiatrico, spoke of the scientific work of Economo, particularly his studies on the cyto-architectonic arrangement of the cortex in man. These studies, which cost Economo thirteen years of continuous research, culminated in the publication of the atlas containing 112 large photographic plates, a unique work in this field. The speaker projected the designs of the five fundamental types of cortex as established by Economo and explained the arrangement in the cortex. Economo brought out the conception of progressive cerebration; namely, of the progressive development of the brain in the phylogenetic series and in the individual species, not only in man but also in dogs and horses. Since the dawn of history there has been a progression in cerebration, as is shown by the development in music through the centuries. The ancient Greeks, though having a high artistic sense, had primitive musical conceptions. Modern music, as understood today, is a recent acquisition of the human cortex.

A study that brought fame to Professor Economo was the discovery, in 1917, of epidemic encephalitis. In the very first cases that came under his observation, he succeeded in pointing out the peculiar clinical, anatomic and biologic characteristics of the disease. The symptomatology of the disease, which is accompanied by peculiar psychic disturbances and disorders of sleep, which range from lethargy to incoercible insomnia, induced Economo to study thoroughly the problems of physiologic sleep and the localization of mental functions. He advanced the theory of the regulatory center of sleep, locating

it in the walls of the third ventricle. This theory has the support of clinical, pharmacologic and experimental evidence. The great scientist refused many offers of directorships of neuropsychiatric clinics, preferring to devote all his energy to research. Death overtook Professor Economo suddenly at the age of 56, apparently as the result of thrombosis of the coronary arteries, a few days after the last International Neurologic Congress, held at Berne in 1931, at which he presented a paper.

Ambulatorium for Diabetic Patients

An ambulatorium for diabetic patients has begun to function in Milan. It will serve as a diagnostic center for the various clinical forms of diabetes, its complications and concomitant diseases, and will constitute a therapeutic guide for the patient. It will also furnish financial aid to the diabetic patient in modest circumstances. In every case, after taking the personal history and the clinical examination, laboratory examinations are carried out: glycemia, basal metabolism, azotemia, tolerance for carbohydrates, and the like. In the matter of diet, two principles that experience has shown to be useful are emphasized: a sparse diet but sufficient for the maintenance of the body weight in relation to height, age and constitution; and avoidance of an excess of proteins, which diminishes the tolerance for carbohydrates and gives rise to the formation of toxic waste material.

JAPAN

(From Our Regular Correspondent)

March 26, 1932.

Lepers Win over Politics

The largest lepers' sanatorium in Japan is in Kumamoto city. It can accommodate over 500 lepers, men and women, and is under the charge of the local government. In this city Miss Helen Riddel, the celebrated American missionary, who died last month, worked among lepers all through her life. When the principal of this sanatorium was to be dismissed, for political reasons, about 500 lepers undertook to march through that city, March 12. They broke the gate and walked out toward the city, to be halted on the outskirts by police and ex-service men who had been hastily mobilized. There was a deadlock for two hours. The police would not let the lepers march on, and the lepers would not go back. In the end, officials from the prefectural office promised to see that the principal should keep his job. The principal is much loved by the lepers, and they were indignant when told that he was to be dismissed.

Eight Physicians Obtain Seats in the House

In the general election, February 20, sixteen practitioners ran for the diet, and just half of them were elected, a decrease of five compared with the general election in 1929. The tendency toward a decrease in the number of medical candidates for the diet is inevitable, because the members are obliged to stay in Tokyo during the session for three months, which is inconvenient for medical practitioners. On the other hand, in the election for the prefectural assembly last winter, medical candidates were more successful, increasing their number by about 40 per cent, because it is much more convenient and suitable for them.

Celebration of Discovery of Tubercle Bacillus

Under the auspices of the Japanese Society for Tuberculosis, the fiftieth anniversary of the discovery of the tubercle bacillus was celebrated, March 24, in Tokyo. The Japanese friends of Koch, knowing that the "Koch-Stiftung" had suffered in the economic crisis in Germany and has nothing left, are anxious to make contributions. The effort has been supported by many philanthropic persons and societies in Japan. Many prominent persons were present on this occasion, including Mr. Inukai, prime mimister, who gave an address. Prince Tokugawa, president of the house of peers, presented the sums raised for the Koch-Stiftung to Dr. Foreztch, the German ambassador to Japan.

Airplane Ambulance

The Japanese Association of Physicians is planning to construct an airplane ambulance, which will be given to the Imperial Japanese Army. The sum of 100,000 yen needed will be raised soon by contributions from members. Dr. Terashi, the well known army surgeon for aeronautics, is said to be making the plan for the ambulance.

VIENNA

(From Our Regular Correspondent)

March 15, 1932.

The Crusade Against Alcoholism

At the seventh Oesterreichischer Alcoholgegner-Tag, the chairman of the "abstinent teachers in Austria" explained the importance of the training of youth in the crusade that is being waged against alcoholism. He pointed out that, according to the large majority of psychiatrists, alcoholism is to be regarded as a mental disease. In this disease, as in all diseases, prophylaxis is the most practical and serviceable measure, because young people trained from early youth to oppose and to reject alcoholic beverages constitute the best weapon in the crusade against alcoholism. What is needed is: (*a*) the training of the oncoming generations of teachers to abstain from alcoholic beverages; (*b*) course on the alcohol question and instruction in abstinence for the teachers of all grades of schools; (*c*) migratory teachers to give instruction in temperance; (*d*) elimination of alcoholic beverages from school festivities and outings—also in the schools of higher learning; (*e*) prohibition of alcoholic beverages in all schools and educational institutions; (*f*) winning over of the schools of domestic science and economy for the prohibition movement.

Sudden Death of Professor Saxl

Dr. Paul Saxl, an eminent authority in internal medicine, died suddenly, a few days ago, during a ski outing, apparently from a heart attack brought on by overexertion, at the age of 52. As a young physician he attracted the attention of Professor von Noorden, who recognized his unusual qualities. Under von Noorden's successor, Professor Wenckebach, he continued at the clinic as first assistant and up to the time of his death was still serving in that capacity. His scientific articles on septic disorders, on the action of metals and on rheumatism served to make his name still further known, but still more his method for the dehydration of the body by means of mercury salts. This is a highly effective method in grave cases of hydrops. The strength of the deceased scientist lay in his stupendous grasp on experimental technic and his unusual powers of observation. His standing was such that he was about to be called to a German university.

Vacant Chairs at the University of Vienna

There are a number of vacant chairs at the University of Vienna that must be filled before the beginning of the winter semester. A worthy successor to the deceased roentgenologist Holzknecht must be found. It is planned to transform his laboratory, which has functioned heretofore only as a "Zentral-Röntgen-Institut" for the General Hospital, into a research and pedagogic institute connected with the university. No proposals as to a successor have yet been made. Furthermore, new directors for the surgical clinic, the clinic for internal medicine (as Professor Chvostek has resigned), and the gynecologic clinic, must be appointed. Professor Halban was chosen to fill the last mentioned position, but a religiopolitical intrigue has prevented him, thus far, from assuming the duties of the post. At the end of this academic year, two other chairs will become vacant. Professor Hochstätter, of the chair of anatomy, and Dr. Schaffer, professor of histology, will

retire in accordance with the law, by reason of having attained the age of 70. These vacant chairs will doubtless all be filled by Austrians. In view of the severe retrenchments necessitated by Austria's financial position, it is not likely that foreign scientists would care to accept a call to Vienna.

Dr. Gerson's Address on Diet Therapy

At a special meeting of the Vienna Medizinisches Doktoren Kollegium, Dr. Gerson delivered an instructive address on his salt-free diet. By means of roentgenograms he showed that also in cases of pulmonary tuberculosis satisfactory results may be obtained, although many investigators do not share his opinion. The progressive contraction of the lung foci could be plainly shown. Dr. Gerson showed how he succeeded, without injuring the organism, in reducing the daily chlorine elimination to from 1.5 to 2.0 Gm., thus bringing about decisive changes in the organism. His absolutely salt-free diet he was able to apply for years to himself, his family and to more than a thousand persons without noting any disadvantages. The most difficult part of his diet therapy is connected with the protein intake. At the beginning of his research he observed that by drastic reduction of the protein intake many chronic dermatoses (eczemas), and also asthma and migraine, clear up. By adding again animal proteins to the diet they can, however, be brought out again. He uses now the following method: He gives, the first week, no protein at all, then slowly increases the amount up to from six to eight egg yolks. Afterward, he allows the patient a little liver for breakfast, and after from four to six hours another small amount. Later soft cheeses are given, for breakfast, from 3 to 10 Gm., and afternoons, from 10 to 30 Gm. Finally, he goes over to kefir and buttermilk. Potatoes with unsalted butter, and also oatmeal, are allowed. A little later, fish and meat may be given once or twice a week. Dr. Gerson explains his success as due chiefly to the "antiphlogistic" factors that his diet produces. A diet rich in potassium, but salt-free and poor in proteins, acts favorably, according to his experience, in lupus and in the presence of keloids; also in about 45 per cent of the cases of migraine. In about 55 per cent, however, there remains a hypersensitiveness to salt or protein. The action of the new diet therapy in migraine is based, in his opinion, on an overcoming of the spasm of the blood vessels and thus of the central nervous system. In itching eruptions, associated with high blood pressure (angina pectoris), the ingestion of large quantities of vegetable juices is especially important. Also in mental diseases excellent results have been recorded, so that Gerson urged his audience to experiment in that direction, stating that he would give written advice on the subject to any one requesting it. During the discussion that followed Dr. Gerson's address, Professor von Noorden (who now resides in Vienna) stated that, in his opinion, limitation of sodium chloride intake suffices (without elimination of protein) to secure therapeutic results. Professor Neumann pointed out that, in spite of the pulmonary cases in which cures had been effected by Gerson's diet, new foci sometimes appeared during the dietary treatment, so that the treatment could hardly be regarded as an absolutely reliable therapeutic method.

Marriages

WILLIAM S. DININGER, Winchester, Ind., to Miss Lela Green of Cincinnati, at Hamilton, Ohio, April 25.

FRANCIS J. QUINLAN, New York, to Mrs. Elizabeth Maurer at Kitchawan, N. Y., April 17.

CECIL E. JOHNSON to Miss Mary May, both of Rensselaer, Ind., at Hammond, April 21.

ROBERT REAGLES, Arlington, Wis., to Miss Nellie M. Chase, April 21.

Deaths

John Alden Lichty ⊕ Clifton Springs, N. Y.; University of Pennsylvania School of Medicine, Philadelphia, 1893; member of the American Gastro-Enterological Association, American College of Physicians, American Climatological and Clinical Association and the American Psychiatric Association; past president of the Ontario County Medical Society; at one time associate professor of medicine, University of Pittsburgh School of Medicine; for many years on the staffs of the Columbia Hospital, Wilkinsburg, and the Mercy Hospital, Pittsburgh; since 1923 superintendent of the Clifton Springs Sanitarium and Clinic; trustee of the Mount Union College, Alliance, Ohio, and the Colgate-Rochester Divinity School, Rochester; aged 66; died, May 2.

Walter John Kremer ⊕ Minneapolis; University of Minnesota Medical School, Minneapolis, 1911; fellow of the American College of Surgeons; formerly instructor in urology at his alma mater; served during the World War; associate urologist to the Minneapolis General Hospital and on the urological staff of the Asbury, St. Mary's and St. Barnabas hospitals; consulting urologist to the U. S. Veterans' Bureau; aged 53; died, April 2, in the Veterans' Administration Hospital, Fort Snelling, of heart disease.

Merlin Chauncey Johnston ⊕ Aberdeen, S. D.; Rush Medical College, Chicago, 1896; formerly assistant professor of pathology, Minneapolis College of Physicians and Surgeons; councilor of the first district of the South Dakota State Medical Association; city and county health officer; past president of the city board of health; aged 59; on the staff of St. Luke's Hospital, where he died, April 2, of valvular heart disease and embolism.

Otto Tiger Freer ⊕ Chicago; Rush Medical College, Chicago, 1879; secretary of the Section on Laryngology and Otology, American Medical Association, 1903-1905, chairman, 1905-1906, and delegate, 1907-1908; formerly associate professor of laryngology and otology at his alma mater; aged 74; for many years on the staff of the Henrotin Hospital, where he died, April 21, of heart disease, chronic myocarditis and paralytic ileus.

Charles Lybrand Bonifield ⊕ Cincinnati; Medical College of Ohio, Cincinnati, 1886; professor of gynecology, University of Cincinnati College of Medicine; member of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, and the Southern Surgical Association; on the staffs of the Cincinnati General Hospital and the Christ Hospital; aged 69; died, April 23, of cerebral hemorrhage.

Frank Spencer Pomeroy, Chardon, Ohio; University of Wooster Medical Department, Cleveland, 1881; University of the City of New York Medical Department, 1885; member of the Ohio State Medical Association; past president of the Geauga County Medical Society; for many years county coroner; aged 76; died, April 12, of pneumonia and cerebral hemorrhage.

Marc Ray Hughes, St. Louis; Barnes Medical College, St. Louis, 1898; member of the Missouri State Medical Association; at one time professor of nervous diseases and psychology at his alma mater; formerly member of the state board of health; served during the World War; aged 54; died, April 5, in the Evangelical Home and Deaconess Hospital, of pneumonia.

William G. Kemper ⊕ Manitowoc, Wis.; Rush Medical College, Chicago, 1882; past president of the Manitowoc County Medical Society; for many years county coroner; formerly mayor and city health officer of Manitowoc; aged 72; on the staff of the Holy Family Hospital, where he died, April 8, of septicemia.

John Ernest Watson, Anderson, S. C.; University of Georgia Medical Department, Augusta, 1899; member of the South Carolina Medical Association; past president of the Anderson County Medical Society; on the staff of the Anderson County Hospital; aged 54; died, April 13, of heart disease.

Jay B. Brewer, Jefferson, Wis.; Bennett College of Eclectic Medicine and Surgery, Chicago, 1893; member of the state board of medical examiners; for ten years mayor of Jefferson; aged 72; died, April 13, in a hospital at Milwaukee, of hypostatic pneumonia, myocarditis and cerebral thrombosis.

Searle Bewley Gillespie, Johnson City, Tenn.; University of Tennessee Medical Department, Nashville, 1905; member of the Tennessee State Medical Association; on the staff of the Jones Eye, Ear, Nose and Throat Hospital; aged 47; died suddenly, April 7, of acute dilatation of the heart.

Benjamin Franklin Shuttleworth ⊕ Clarksburg, W. Va.; Jefferson Medical College of Philadelphia, 1905; formerly member of the Public Health Council; fellow of the American College of Physicians; on the staff of St. Mary's Hospital; aged 54; died suddenly, March 31, of heart disease.

Eugene A. Crouse, Grundy Center, Iowa; University of Pennsylvania School of Medicine, Philadelphia, 1870; member of the Iowa State Medical Society; past president of the Grundy County Medical Society; aged 85; died suddenly, April 8, of cerebral hemorrhage.

Jefferson D. Kiser ⊕ Bartlesville, Okla.; Kentucky School of Medicine, Louisville, 1894; member of the American Academy of Ophthalmology and Oto-Laryngology; on the staff of the Washington County Memorial Hospital; aged 63; died, April 14, of heart disease.

John William Landgraf ⊕ Seneca, Ill.; Northwestern University Medical School, Chicago, 1909; aged 45; died, April 18, in the Ryburn-King Hospital, Ottawa, of injuries received when his car, which he was having greased, overturned on him from a hydraulic lift.

William E. Connor ⊕ Cumby, Texas; University of Louisville (Ky.) School of Medicine, 1894; past president of the Hopkins County Medical Society; bank president; aged 59; died, April 7, in a hospital at Dallas, of heart disease, following an operation.

Earl Lester Hall, Princeton, Minn.; University of Minnesota College of Homeopathic Medicine and Surgery, Minneapolis, 1902; aged 54; died, April 8, in the Veterans' Administration Hospital, Fort Snelling, of bronchopneumonia.

Martin Van Buren Dunham, Greenfield Hill, Conn.; Harvard University Medical School, Boston, 1867; member of the Connecticut State Medical Society; Civil War veteran; aged 91; was found dead in bed, April 21, of heart disease.

John William Hopkins, Maryville, Mo.; Rush Medical College, Chicago, 1931; member of the faculty of the Northwest Missouri State Teachers' College; aged 28; died, April 8, in a local hospital, of a self-inflicted bullet wound.

Cyrus Monroe Easton, Davenport, Neb.; Rush Medical College, Chicago, 1872; formerly member of the board of education of Hebron; aged 89; died, February 21, of cerebral hemorrhage while on a visit in Oklahoma.

George T. Hannah, Toledo, Ohio; Ohio Medical University, Columbus, 1906; member of the Ohio State Medical Association; aged 51; died, April 15, in the Mercy Hospital of cholelithiasis and intestinal obstruction.

Jacob T. Cramer, Muskegon, Mich.; Rush Medical College, Chicago, 1904; member of the Michigan State Medical Society; formerly city and county physician; aged 50; died, April 5, of cerebral hemorrhage.

Oliver R. Eylar, Waverly, Ohio; Starling Medical College, Columbus, 1900; member of the Ohio State Medical Association; county health officer; aged 71; died, April 17, in Circleville, of cerebral hemorrhage.

Henry Schell Kimmell, Somerset, Pa.; Jefferson Medical College of Philadelphia, 1880; for many years county coroner; formerly member of the school board; aged 74; died suddenly, March 31, of heart disease.

Elliott R. Hatfield, Charleston, W. Va.; Hospital College of Medicine, Louisville, Ky., 1898; member of the West Virginia State Medical Association; aged 59; was found dead, April 20, of heart disease.

Partee Harris Mangrem, Columbia, Tenn.; University of Tennessee Medical Department, Nashville, 1894; member of the Tennessee State Medical Association; aged 65; died, April 12, of angina pectoris.

Charles Leopold Barewald, Davenport, Iowa; State University of Iowa College of Medicine, Iowa City, 1891; formerly mayor of Davenport; aged 61; died suddenly, April 14, of heart disease.

William R. Reves ⊕ Alma, Ark.; University of Tennessee Medical Department, Nashville, Tenn., 1892; aged 72; died, February 7, in Fort Smith, of angina pectoris, cholelithiasis and myocarditis.

Robert H. Wicker, Rome, Ga.; University of Georgia Medical Department, Augusta, 1878; member of the Medical Association of the State of Georgia; aged 74; died, April 10, of pneumonia.

Franklin Henry Staley, Vienna, S. D.; Rush Medical College, Chicago, 1886; member of the South Dakota State Medical Association; aged 72; died, April 2, of carcinoma of the stomach.

C. K. Tillison, Ramona, Okla.; Northwestern Medical College, St. Joseph, Mo., 1893; member of the Oklahoma State Medical Association; aged 62; died, April 13, of cerebral hemorrhage.

Albert Lee Yocom, Chariton, Iowa; College of Physicians and Surgeons, Keokuk, Iowa, 1886; city health officer; aged 76; died, in March, at the Yocom Hospital, following an operation.

Elmer F. Brown ⊕ Groveton, N. H.; Baltimore Medical College, 1897; aged 63; died, April 10, in the Lancaster (N. H.) Hospital, of strangulated ventral hernia and paralytic ileus.

James Claude Fortenberry, Zavalla, Texas (registered by Texas State Board of Medical Examiners under the Act of 1907); aged 53; died, April 6, in a sanatorium at San Antonio.

Ezra Dwight Chase ⊕ Chicago; Northwestern University Medical School, Chicago, 1905; on the staff of the Garfield Park Hospital; aged 50; died, May 2, of chronic myocarditis.

Louis A. Mehler, Louisville, Ky.; University of Louisville School of Medicine, 1908; member of the Kentucky State Medical Association; aged 60; died, March 30, of heart block.

Joseph William Pecony ⊕ Denver; John A. Creighton Medical College, Omaha, 1914; aged 43; was found dead, April 7, of strychnine and morphine poisoning, self-administered.

Carlton Monroe McGuire, Humeston, Iowa; Rush Medical College, Chicago, 1891; formerly coroner of Huerfano County, Colo.; aged 69; died, March 27, of cerebral hemorrhage.

Joseph Ernest Maunders, Detroit; Detroit College of Medicine, 1911; member of the Michigan State Medical Society; aged 52; died suddenly, April 13, of cerebral hemorrhage.

John C. Hayward ⊕ Marshfield, Wis.; Chicago Medical College, 1882; past president of the Wood County Medical Society; aged 74; died, April 11, of chronic myocarditis.

David Napoleon Haydon, Mount Dora, N. M. (licensed, Indiana, 1897); also a druggist; aged 78; died, in February, at a hospital in Las Vegas, of cerebral hemorrhage.

Louis Henry Fleck ⊕ Brooklyn; Long Island College Hospital, Brooklyn, 1896; on the staff of St. Catherine's Hospital; aged 56; died, April 18, of heart disease.

Benjamin W. Tilford, Martinsville, Ind.; Butler University Medical Department, Indianapolis, 1881; formerly a druggist; aged 72; died, in April, of heart disease.

George M. Galley, Cincinnati; Medical College of Ohio, Cincinnati, 1905; aged 60; died, April 10, in St. Mary's Hospital, of acute dilatation of the heart.

Merrit B. Hook, Denver; Rush Medical College, Chicago, 1900; member of the Colorado State Medical Society; aged 57; died, April 12, of heart disease.

Carol Skinner Cole ⊕ St. Louis; Washington University School of Medicine, St. Louis, 1922; aged 43; was killed, March 21, in an airplane accident.

John William Dobson, Moweaqua, Ill.; University of Michigan Medical School, Ann Arbor, 1892; aged 67; died, April 15, of coronary thrombosis.

Burr Hamilton Emerson, Stockton, Mo.; Kansas City Medical College, 1899; aged 56; died, April 10, of injuries received when he fell downstairs.

William Edward Reller, Twin Falls, Idaho; Hahnemann Medical College and Hospital, Chicago, 1885; aged 68; died, March 27, of heart disease.

John B. Wear, Poteau, Okla.; University of Arkansas School of Medicine, Little Rock, 1888; aged 76; died, March 10, of cerebral hemorrhage.

Joseph Cooper Densten, Scranton, Pa. (licensed, Pennsylvania, 1869); aged 83; died, April 8, of pneumonia, following burns received in a fire.

Hermon C. Hill, Benton Harbor, Mich.; Rush Medical College, Chicago, 1892; aged 65; died, April 17, of a self-inflicted bullet wound.

John Anderson Burris, Riverside, Ky.; University of Louisville School of Medicine, 1907; aged 54; died, April 17, of cardiac asthma.

Mary E. Barnes Ray, Ponca City, Okla.; Homeopathic Hospital College, Cleveland, 1887; aged 68; died, April 12, of heart disease.

Brock E. Brush ⊕ Port Huron, Mich.; Detroit College of Medicine, 1896; aged 66; was found dead, April 15, of cerebral hemorrhage.

Thomas J. Walsh, Chicago; Rush Medical College, Chicago, 1896; aged 55; died, April 21, of coronary thrombosis.

Correspondence

VEIN LIGATION IN THE TREATMENT OF ARTERIOSCLEROTIC AND DIABETIC GANGRENE

To the Editor:—In THE JOURNAL, March 12, Herman E. Pearse, Jr., gives a comprehensive discussion of vein ligations in the treatment of arteriosclerotic and diabetic gangrene. Since the publication of my first case (THE JOURNAL, April 13, 1929, p. 1264), vein ligation was performed in two patients. The indications in all three cases were the same: an impending gangrene, but no break in the continuity of the skin, absence of peripheral pulses below the popliteal artery, excruciating pain both after exercise and at rest. These patients would more or less fit into group 3 of Dr. Pearse's classification.

The immediate results (two popliteal veins and one femoral vein were ligated) were very gratifying, in that there was relief from pain and marked increase in surface temperature. Nevertheless, all three cases came to amputation within six months. Edema, which according to Dr. Pearse occurred only once in thirty cases, was present in all three patients. It did not come on immediately after the operation or when the patient first got out of bed but weeks or months later. Thus, the first patient, when examined four months after the operation, was still free from edema. The appearance and intensity of the edema due to vein ligation depends on the extension of the clot into tributaries and not so much on the venous obstruction at one point (Zimmermann and de Takáts, *Arch. Surg.* **23**:937-953 [Dec.] 1931). It is just possible that such vein ligations favor the production of massive thromboses that may occur with arterial occlusions. In the first case, in which I performed amputation six months later, there was an extensive thrombosis distal to the ligature extending into smaller tributaries. The other two patients had amputation done elsewhere.

While the immediate relief in these cases is obvious, the late results have not encouraged me to continue this procedure. Conservative treatment in this group has arrested the disease in at least as large a proportion (60 per cent) as vein ligation in Dr. Pearse's series.

GÉZA DE TAKÁTS, M.D., Chicago.

THALLIUM PREPARATIONS DANGEROUS TO WILD BIRDS AND ANIMALS

To the Editor:—So much has appeared in THE JOURNAL during the past year regarding thallium poisoning, principally from the use of depilatory creams, that it may be of interest to note that probably the largest users of thallium are the state and federal governments in an effort to control wild rodents.

In California, during 1928, 7,739,070 acres of land was treated for ground squirrels. More than 2,000,000 pounds of poisoned grain was used, of which 602,728 pounds was thallium treated (Linsdale, Jean M.: Facts Concerning the Use of Thallium in California to Poison Rodents—Its Destructiveness to Game Birds, Song Birds and Other Valuable Wild Life, *Condor* **33**:95 [May] 1931). The amount of thallium in this large amount of grain is not stated but it must be considerable. The other poison used is strychnine.

As may be inferred from the title of Linsdale's article, naturalists are gravely concerned over this wholesale distribution of poison, as many other forms of wild life besides the ground squirrels apparently are killed. Joseph Grinnell in an editorial in the *Condor* (**33**:131) makes the statement that "in the last four years not less than 50 *million* animals *other than* ground squirrels have been killed in California through these operations." Most of the members of national societies interested in birds and mammals (American Ornithologists' Union, National Association of Audubon Societies for the Protection of Wild Birds and Animals, American Society of Mammalogists) are rather strongly opposed to this wholesale use of poisons and view with alarm further destruction of our fast vanishing wild life.

M. W. LYON, JR., M.D., South Bend, Ind.

HYSTERECTOMY AND PANHYSTERECTOMY

To the Editor:—THE JOURNAL for April 2 contains a specimen of faulty orthography that it seems to me should not be allowed to go entirely unchallenged. In the article on "Chorionepithelioma of the Uterus," by Lackner and Leventhal, on page 1138, first column, ninth line from the top, the statement is made that "a panhysterectomy was rapidly performed." On page 1139, beginning at the fourteenth line, the following occurs: "When the vaginal metastases occurred, the question arose as to whether the cervix should be removed. We had not performed a total hysterectomy . . ."

Now, to my mind, the word "panhysterectomy" means one thing, and only one thing, the complete removal of the uterus, body and cervix, and has nothing to do with the adnexa or other structures. Used thus, properly, the two statements are of course incompatible. Unfortunately, I find that among nurses and others there is an unfortunate tendency to misuse the term "panhysterectomy" to refer to the removal of the corpus uteri with the adnexa, but it seems strange to find it thus totally misapplied in a scientific article appearing in a publication of the standing of THE JOURNAL.

GEORGE W. OUTERBRIDGE, M.D., Philadelphia.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TEMPERATURE OF THE LIVER

To the Editor:—For some time I have been carrying on clinical researches in the thermic treatment of the liver, produced by means of high frequency currents. 1. I am anxious to know whether the temperature of the liver itself or the temperature of the blood leaving the liver is higher than that of the other tissues, the brain perhaps, excepted. I am aware of the metabolic rise that takes place during the digestive phase of the liver. I know that Dr. Crile believes that the tissues of the brain and liver are of higher temperature. 2. Do you know of any experiments or investigations along this line that would give me the information I desire? 3. Is the circulation in the liver of such volume that practically the entire blood of the body would pass through the hepatic circulation in a few minutes? Please omit name.

M.D., Kentucky.

ANSWER.—1. The liver is by no means the hottest organ of the body. Ito (*Ztschr. f. Biol.* **38,** 1899) found the duodenum the hottest organ—higher than the liver—in a large series of readings on various organs (both in normal animals and in animals after heat puncture). It is generally conceded that the liver and the skeletal musculature contribute most of the heat of the body. The liver, of all organs, is the first to experience an increased temperature when hibernating animals awaken. The liver is hotter than aortic blood. However, into the liver there is poured blood from various internal organs—a venous blood not subjected to cooling before reaching the liver. What is more significant, blood in the hepatic veins has a higher temperature than the blood reaching the liver through the portal vein, indicating an active heat production by the liver. Denervation (or enervation) of the liver results in a marked diminution in the ability of the animal to regulate body temperature in the absence of shivering (destruction of the plexus hepaticum in dogs, described by Plaut: *Ztschr. f. Biol.* **76,** 1922).

2. Cloetta and Waser (*Arch. f. exper. Path. u. Pharmakol.* **79,** 1915) made extensive thermo-electric measurements of various parts of the body during the action of intravenously injected epinephrine.

3. The experiments of K. Hürthle on two dogs and two rats demonstrate the significant capacity changes which the liver is

capable of showing. This organ, perfused with blood through the portal vein under a pressure of from 20 to 50 cm. of water, can hold from 15 to 50 per cent of its weight in blood, which amounts to a fifth or a sixth of the total blood of the animal, exclusive of the blood coming to the liver by way of the hepatic artery (*Handb. d. normal. u. path. Physiol.* **7**:1486, 1927). On the basis of observations made independently by three different observers, the rate of blood flow through the liver amounts to from 85 to 100 cc. per hundred grams of liver a minute. Only Burton-Opitz measured directly the rate of flow through the hepatic artery and portal vein (*Quart. J. Exper. Physiol.* **4**:113, 1911). From this it would appear that the entire blood of the body can theoretically pass through the liver in a short time even if not "in a few minutes."

BLOOD GROUPS AND GROUP TESTING

To the Editor:—Will you please give me information on the following: Is the blood of children always of the same group as that of the father? Suppose the mother belongs to a different group from the father, will the children still have the same group as the father? If not, how does it work out? How much blood is needed for group testing? What is the best vehicle: Test tube, clot on slide or smear? Please omit name.

M.D., New York.

ANSWER.—The blood of children is not always of the same group as that of the father. Ottenberg and Beres, who have been much interested in the question of inheritance of blood groups, write as follows in Jordan and Falk's "Newer Knowledge of Bacteriology and Immunology," pages 911 and 912: "It is clear that not the groups as such are inherited but the presence or absence of the agglutinogens A and B (Landsteiner International Classification). Von Dungern and Hirschfeld in 1910 observed that: (1) A or B never occurs in the red cells of a child if not present in one of the parents. (2) When one of these substances is present in both parents it occurs in most of the children. (3) When only one parent has one of these particular substances some of the children inherit it. (4) When a particular substance is absent from both parents no child ever has it." Although a number of workers have repeatedly confirmed the statements of Ottenberg and Beres, the subject is still one of controversy.

Although the determination of the blood group can be made with only a few drops of red blood cells, it is preferable to have at least 0.5 cc. of whole blood and 0.25 cc. of blood in sodium citrate (2 per cent) or in some other anticoagulant.

It is convenient to have a test tube for the whole blood and another test tube containing the anticoagulant for the red blood cells.

UNDULANT FEVER

To the Editor:—I have under treatment a case of undulant fever. The patient is a married woman, aged 21. She has been acutely ill since Oct. 17, 1931, when I first saw her, and has been hospitalized since that time. It took several weeks to make a definite diagnosis, but a positive blood culture for Brucella abortus, bovine type, was obtained the latter part of November. Positive cultures have never been obtained from the stools or urine. Early in December she had very acute gallbladder symptoms; these did not abate and cholecystectomy was done. This was followed by a two weeks' remission of fever, but the temperature went up again. Early in January she had acute symptoms referable to the left ovary (the right ovary had been removed several years before). Left oophorectomy was done and smears from the ovary showed the organisms in great abundance. This operation was also followed by a ten day remission of fever, but since then the temperature has ranged from 101 to 105 F. every day. The treatment at present is almost entirely symptomatic. She is getting ultraviolet radiation daily. I have given various tonics, hematinics and protein injections. I also tried methyl violet as recommended in an article by Leavell, Poston and Amoss in THE JOURNAL, Sept. 20, 1930, but with no benefit. In spite of the long illness, her general condition appears good. Hemoglobin is 79 at this time. Recent textbooks do not offer anything helpful, nor have I found much help in the literature. It seems that there is no vaccine or serum available and intravenous medication is not advised. Can you offer any suggestions? I will watch THE JOURNAL with interest. Please omit name.

M.D., Virginia.

ANSWER.—Several observers (Simpson, Harbinson, Angle, Helwig, Bassett-Smith, Auricchio, Cumston, de Finis, Giuffrè, Khaled and Prausnitz in the articles listed below) have reported favorable therapeutic results with specific Brucella melitensis (abortus) vaccine therapy. The intravenous administration of mercurochrome-220 soluble or acriflavine hydrochloride has been advocated by a few physicians, while others have reported that such therapy was ineffective. The transfusion of whole blood of a person who has made a satisfactory recovery from undulant fever has been employed in a few instances with apparently satisfactory results. Two Brucella melitensis variety abortus vaccines have been accepted for New and Nonofficial Remedies (THE JOURNAL, February 6, p. 480, and May 14, p. 1744).

1. Simpson, W. M.: Undulant Fever (Brucelliasis): A Clinicopathologic Study of Ninety Cases Occurring in and About Dayton, Ohio, *Ann. Int. Med.* **4**: 238 (Sept.) 1930; The Clinical Picture of Undulant Fever, *Ohio State M. J.* **27**: 21 (Jan.) 1931; Undulant Fever (Brucelliasis), *U. S. Nav. M. Bull.* **29**: 581 (Oct.) 1931. Simpson, W. M., and Frazier, Eunice: Undulant Fever: Report of Sixty-Three Cases Occurring in and About Dayton, Ohio, THE JOURNAL, **93**: 1958 (Dec. 21) 1929.
2. Harbinson, J. E.: Undulant Fever in California, *Ann. Int. Med.* **4**: 484 (Nov.) 1930.
3. Angle, F. E.: The Treatment of Undulant Fever with Vaccine, *J. Kansas M. Soc.* **30**: 323 (Oct.) 1929.
4. Helwig, F. C.: Undulant Fever, *J. Missouri M. A.* **26**: 449 (Sept.) 1929.
5. Bassett-Smith, P. W.: Undulant Fever, *J. Trop. Med. & Hyg.* **24**: 173 (July 1) 1921.
6. Auricchio, L., cited by Evans, A. C.: Studies on Brucella (Alkaligenes) Melitensis, Bull. 143, Hyg. Lab., U. S. P. H. S., p. 3.
7. Cumston, G. C.: The Treatment of Malta Fever, *M. J. & Rec.* **121**: 219 (Feb. 18) 1925.
8. de Finis, G.: L'immunoterapie dei tifo, dei paratifi a della febbre mediterranea con i vaccini lisizzati di Cristina e Caronia, *Pediatria* **31**: 11 (Jan. 1) 1923.
9. Guiffrè, M.: Osservationi sulla vaccinoterapia nella febbre mediterranea, *Pediatria* **35**: 345, 1927.
10. Khaled, Z., cited by Evans.
11. Prausnitz, C.: Infektionen des Menschen durch des Bacterium Abortus Bang, *Med. Klin.* **25**: 135 (Jan. 25) 1929.

PULMONARY ANTHRAX

To the Editor:—A white girl, aged 18, with pulmonary anthrax, has been under my care since Sept. 14, 1931. Her temperature continues to range between 97 and 103 F., usually between 97 and 100.3. She has chills occasionally. She has had 650 cc. of antianthrax serum intravenously, the last injection, October 6, causing an anaphylactic reaction. The right lung had to be drained seven times between September and November but has not needed attention since. The constant fever and occasional chill with a higher fever are very discouraging and it is thought that another course of serum might be beneficial. Would this be possible and if so how would one go about desensitizing the patient? She is getting salicylates, iodides and sodium cacodylate. Would you recommend any other course of treatment? Please omit name.

M.D., Nebraska.

ANSWER.—No special recommendations for treatment will be made, but it may be suggested that special efforts be put forth to determine whether any secondary infection has developed. It is possible that the case no longer is one of pure anthrax infection. It is difficult to prescribe exactly how desensitization should be carried out. Assuming that the antianthrax serum to be used has been developed in the horse, desensitization would better be begun with not more than 0.01 cc. of the serum subcutaneously and if no symptoms appear this dose might be doubled every half hour or so until 1 cc. has been given; then in another half hour 0.1 cc. should be given intravenously and this doubled every fifteen to twenty minutes until the required amount of serum has been injected. The serum given intravenously should be diluted with an equal amount of physiologic solution of sodium chloride and injected as slowly as possible. Dyspnea, cyanosis, coughing, restlessness, swelling of the face, erythema and urticaria are the symptoms to be watched for. Needless to say, before desensitization is begun, preparation should be made for the prompt administration of epinephrine if necessary. The symptoms may come on immediately on introduction of the serum, or soon after.

VERTIGO AND INTERNAL EAR

To the Editor:—A man is struck on the point of the jaw and develops dizziness, which lasts for more than three years. Tests show impaired hearing on the left side of nerve deafness type and impaired labyrinthine function, as evidenced by a response to a caloric test on the right side after thirty seconds' douching, and no response on the left side after three minutes' douching. As the blow seemed hardly violent enough to produce such severe symptoms, some other possible cause is being looked for. Do you think that a focus of infection in the teeth could explain his affliction? Disregarding this accident, would you consider that a vertigo which improved after a generous dosage of sodium salicylate was most likely due to toxins of bacterial origin? In other words, would sodium salicylate dosage be a therapeutic test to determine whether vertigo was due to a focus of infection? Please omit name.

M.D., New York.

ANSWER.—A blow on the head may cause severe injury to the inner ear, so that impairment of the inner ear with disturbance of the vestibular function may result. Everything else being equal, the cochlea, or hearing portion, is the more likely to be damaged and, if acute hemorrhage occurs, both the hearing and the vestibular mechanism may entirely lose their function. This is what probably happened in the case cited. It is doubtful whether any infection of the teeth could suddenly produce such a lesion. In some instances an apical abscess may produce a toxemia, which in turn causes a temporary change in the

cochlear function with tinnitus or noises in the head or, on the other hand, disturbance of the vestibular mechanism may occur with resulting vertigo. After the removal of the infected tooth, these symptoms usually subside. It is doubtful whether sodium salicylate will eliminate a vertigo or that it could be used as a therapeutic test when the vertigo is due to a focus of infection.

PARESIS OF ORBICULARIS PALPEBRAE MUSCLE THROUGH INJECTION OF PROCAINE

To the Editor:—A dentist recites an experience in which the injection of a few cubic centimeters of 1 per cent procaine into the lingual canal caused a marked dilatation of the palpebral fissure of the left eye. This occurred five minutes after injection. He kept the patient in the office thirty-five minutes, at the end of which time the fissure returned to normal. There were no other signs or symptoms of shock or idiosyncrasy or complaints that would make one think it was due to the type of fluid injected. I would be pleased to receive an explanation of this. MAC. D. CAMPBELL, M.D., Detroit.

ANSWER.—The widening of the palpebral fissure was undoubtedly due to a temporary paresis of the orbicularis palpebrae muscle by nerve block by the procaine, with subsequent drooping of the lower lid from gravity. The lower part of the muscle is innervated by the zygomatic branch of the facial nerve, which ordinarily is given off immediately after emergence of the nerve from the stylomastoid foramen. But in some instances the zygomatic or second branch of the facial nerve accompanies the cervicofacial or third branch for a short distance along its course, and probably in the case referred to the somewhat abnormally located second branch was blocked by procaine that must have escaped into the tissues around the "lingual canal." Any drug used for nerve blocking would have produced the same results under identical circumstances.

"GLUCOSIN"

To the Editor:—Please advise me as to whether the product "Glucosin" is a recognized one. One of my patients, with a blood sugar of 350 mg., has been promised a "sure cure" in six months with this product by this Dr. A. Casagrande, the distributor of the product. Is Dr. Casagrande a doctor of proper standing and qualified to practice medicine in this country? M. F. LEHMAN, M.D., Little Neck, L. I.

ANSWER.—The advertising circular referred to is a typical example of pseudoscientific polyglandular therapeusis. The name of the promoter is not a familiar one to those in authority in the field of diabetes in America, and it is doubtful whether his Italian colleagues regard him as an authority. It should be evident that any one promising a "sure cure" of diabetes in six months must be a charlatan.

BORIC ACID HARMFUL INTERNALLY

To the Editor:—One of my patients is interested in knowing whether boric acid taken in pill or capsule form, 20 grains daily, for reducing purposes would be harmful. Please omit name. M.D., Wisconsin.

ANSWER.—Boric acid, 1.3 Gm. (20 grains), taken internally for reducing purposes, would be decidedly harmful. A number of deaths from boric acid have been reported. A few years ago THE JOURNAL discussed editorially the deaths of six infants in a hospital resulting from the nurses having inadvertently mistaken a bottle containing boric acid for one containing water (THE JOURNAL, March 12, 1927, p. 841).

OBSESSION FOR EGGS IN DIET

To the Editor:—I have had under observation a man who suffers from cerebral arteriosclerosis and who has an obsession for eggs, eating from six to eight daily. As a result of this he has had a foul sulphide breath, which I have been unable to eliminate. The family of my patient can hardly put up with this odor and the patient refuses to eat anything except milk and eggs. He is not troubled with constipation. He takes acidophilus milk twice a day, but this had not helped him. The teeth and throat are normal. Please advise me whether you know what can benefit this man. Kindly omit name. M.D., New York.

ANSWER.—It is difficult to see what can benefit the patient if he persists in limiting his food intake to milk and eggs. This procedure results not only in the excess of eggs but naturally produces a marked disturbance of the nutritional balance. This, of course, cannot be rectified except by an entire change in the diet. However, it might be of some avail to add milk sugar to his milk so that there is an excess of available lactose in the gastro-intestinal canal. Also, some form of alkali, such as sodium bicarbonate or magnesia magma, might be of help. These suggestions are, of course, merely palliative.

Council on Medical Education and Hospitals

COMING EXAMINATIONS

AMERICAN BOARD FOR OPHTHALMIC EXAMINATIONS: Montreal, Sept. 19. Sec., Dr. William H. Wilder, 122 S. Michigan Ave., Chicago.

ARIZONA: Phoenix, July 5-6. Sec., Dr. B. M. Berger, 12 North Central Ave., Phoenix.

CALIFORNIA: *Reciprocity.* Los Angeles and San Francisco, June 15. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento.

COLORADO: Denver, July 5. Sec., Dr. Wm. Whitridge Williams, 422 State Office Bldg., Denver.

CONNECTICUT: *Basic Science.* New Haven, June 11. Prerequisite to license examinatjon. Address State Board of Healing Arts, 1895 Yale Station, New Haven.

DELAWARE: Wilmington, June 14-16. Sec., Dr. Harold L. Springer, 1013 Washington St., Wilmington.

DISTRICT OF COLUMBIA: *Basic Science.* Washington, June 29-30. Sec., Dr. W. C. Fowler, 203 District Bldg., Washington.

FLORIDA: Tampa, June 13-14. Sec., Dr. W. M. Rowlett, 812 Citizens Bank Bldg., Tampa.

GEORGIA: Atlanta, June 15-16. Joint Sec., Mr. R. C. Coleman, 111 State Capitol Bldg., Atlanta.

ILLINOIS: Chicago, June 28-July 1. Supt., Mr. Paul B. Johnson, Springfield.

INDIANA: Indianapolis, June 21-23. Sec., Dr. William R. Davidson, 413 State House, Indianapolis.

IOWA: Iowa City, June 7-9. Dir., Mr. H. W. Grefe, Capitol Building, Des Moines.

KANSAS: Kansas City, June 21-22. Sec., Dr. C. H. Ewing, Larned.

KENTUCKY: Louisville, June 8-10. Sec., Dr. A. T. McCormack, 532 W. Main St., Louisville.

LOUISIANA: New Orleans, June 9-11. Sec., Dr. Roy B. Harrison, 1507 Hibernia Bank Bldg., New Orleans.

MAINE: Augusta, July 5-6. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MARYLAND: *Homeopathic.* Baltimore, June 14-15. Sec., Dr. John A. Evans, 612 W. 40th St., Baltimore. *Regular.* Baltimore, June 21-24. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore.

MICHIGAN: Ann Arbor and Detroit, June 7-9. Sec., Dr. Nelson McLaughlin, 1010 Maccabee Bldg., Detroit.

MINNESOTA: *Basic Science.* Minneapolis, June 7-8. Sec., Dr. J. Charmley McKinley, 126 Millard Hall, University of Minnesota, Minneapolis. *Regular.* Minneapolis, June 21-23. Sec., Dr. E. J. Engberg, 524 Lowry Medical Arts Bldg., St. Paul.

MISSOURI: St. Louis, June 14-16. Sec., Dr. James Stewart, Capitol Bldg., Jefferson City.

NATIONAL BOARD OF MEDICAL EXAMINERS: Examinations in Parts I and II will be held at all centers where there are five or more candidates, but not at Durham, Minneapolis, nor New Haven, June 27-29. Ex. Sec., Mr. Everett S. Elwood, 225 South 15th St., Philadelphia.

NEBRASKA: *Regular.* Omaha, June 9-11. Dir., Mrs. Clark Perkins, Lincoln.

NEW JERSEY: Trenton, June 21-22. Sec., Dr. James J. McGuire, 1101 Trenton Trust Bldg., Trenton.

NEW YORK: Albany, Buffalo, New York, Syracuse, June 27-30. Chief, Professional Examinations Bureau, Mr. Herbert J. Hamilton, Room 315, State Education Bldg., Albany.

NORTH CAROLINA: Raleigh, June 20. Sec., Dr. John W. MacConnell, Davidson.

NORTH DAKOTA: Grand Forks, July 5-8. Sec., Dr. G. M. Williamson, Grand Forks.

OHIO: Columbus, June 7-10. Sec., Dr. H. M. Platter, 85 E. Gay St., Columbus.

OKLAHOMA: Oklahoma City, June 8-10. Sec., Dr. J. M. Byrum, Shawnee.

OREGON: Portland, July 5-7. Sec., Dr. C. J. McCusker, 1014 Medical Dental Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 5-9. Sec., Mr. Charles D. Koch, Dept. of Public Instruction, Harrisburg.

RHODE ISLAND: Providence, July 7-8. Dir., Dr. Lester A. Round, 319 State Office Bldg., Providence.

SOUTH CAROLINA: Columbia, June 28. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

TEXAS: Marlin, June 21-23. Sec., Dr. T. J. Crowe, 918-19 Mercantile Bank Bldg., Dallas.

UTAH: Salt Lake City, July 6-8. Dir., Mr. S. W. Golding, 326 State Capitol Bldg., Salt Lake City.

VERMONT: Burlington, June 22-24. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 15-18. Sec., Dr. J. W. Preston, 803 Medical Arts Bldg., Roanoke.

WASHINGTON: *Basic Science.* Seattle, July 7-8. *Regular.* Seattle, July 11-12. Dir., Mr. Charles Maybury, Olympia.

WISCONSIN: Milwaukee, June 28-30. Sec., Dr. Robert E. Flynn, 315 State Bank Bldg., LaCrosse.

WYOMING: Cheyenne, June 6. Sec., Dr. W. H. Hassed, Capitol Bldg., Cheyenne.

Washington January Report

Mr. George L. Berger, assistant director, Washington Department of Licenses, reports the written examination held at Seattle, Jan. 18-19, 1932. The examination covered 8 subjects. A grade of 60 per cent was required in each subject. Twenty-one candidates were examined, all of whom passed. Seven physicians were licensed by reciprocity with other states and 2 physicians were licensed by endorsement. The following colleges were represented:

PASSED College	Year Grad.	Per Cent
George Washington University School of Medicine	(1931)	78*
Northwestern University Medical School	(1931)	76, 79†
Rush Medical College	(1923) 82, (1931)	79, 80

University of Minnesota Med. School	(1931) 74, 77,†	(1932)	75, 80
Washington University School of Medicine		(1931)	78*
University of Nebraska College of Medicine		(1931)	72,* 77
University and Bellevue Hospital Medical College		(1920)	75
University of Oregon Medical School	(1930) 76,	(1931)	76,* 77,* 78*
University of Manitoba Faculty of Med	(1926) 78,	(1927)	74
University of Toronto Faculty of Medicine		(1931)	80*

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University Medical School		(1909)	California
University of Louisville School of Medicine		(1931)*	Kentucky
University of Minnesota Medical School		(1931)	Minnesota
Barnes Medical College, Missouri		(1908)	Idaho
Creighton University School of Medicine		(1926)	Nebraska
University of Oregon Med. School	(1928)	Missouri, (1930)	Oregon

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
Northwestern University Medical School	(1915),	(1926)	N. B. M. Ex.

* Certificates are being withheld pending completion of internship.

† The M.D. degrees and certificates are being withheld pending completion of internship.

North Dakota January Report

Dr. G. M. Williamson, secretary, North Dakota State Board of Medical Examiners, reports the oral, written and practical examination held at Grand Forks, Jan. 5-8, 1932. The examination covered 13 subjects and included 100 questions. An average of 75 per cent was required to pass. Six candidates were examined, all of whom passed. One physician was licensed by reciprocity and 1 by endorsement. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
Northwestern University Medical School	(1929) 83,	(1931)	84, 84.3
Indiana University School of Medicine		(1929)	75
University of Minnesota Medical School	(1930) 78.8,	(1931)	77.6

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University Medical School		(1925)	Illinois

College	LICENSED BY ENDORSEMENT	Year Grad.	Endorsement of
University of Minnesota Medical School		(1930)	N. B. M. Ex.

Book Notices

Laboratory Technique. By R. B. H. Gradwohl, M.D., Director, Gradwohl School of Laboratory Technique. With the collaboration of I. E. Gradwohl, B.A., Associate Director, and A. S. Gradwohl, Assistant Director, Gradwohl School of Laboratory Technique, St. Louis, Mo. Cloth. Price, $8. Pp. 462, with 148 illustrations. St. Louis: Gradwohl School of Laboratory Technique, 1932.

The authors have compiled a manual of laboratory tests used in medical and surgical diagnoses. The tests are described clearly and concisely, and the directions are explicit. The chapters of the book cover the usual range of subjects discussed in the more comprehensive books on laboratory methods, with added features of chapters on photomicrography, mycology and parasitology. The methods given in the last mentioned chapter are those in vogue at the Hamburg Institute of Tropical Medicine. In the chapter on hematology, special stress is given to the methods and interpretations of blood examination sponsored by Schilling. The illustrations are grouped in the back of the book as a concise atlas of common microscopic subjects encountered in routine laboratory examinations. Instead of the conventional diagrammatic sketches, the authors present photomicrographs in an effort to picture the natural appearance under a microscope. The purpose of the authors is excellent, but unfortunately the ideal has not been accomplished in the pictures of some of the leukocytes where nuclear detail is of paramount importance in successful identification. A chapter on basal metabolism is of great value, containing explicit directions and various tables on different standards and data sheets. Bacteriology and serology are unusually complete for a manual of laboratory technic. The bulk of the book might have been sacrificed for one of more convenient size, especially where methods are presented and it is important to follow the text closely. The authors have made no attempt to offer any interpretative conclusions but desire merely to develop a working manual of standard methods now in use. While they present a comprehensive treatise of medical laboratory methods intended for the profession, the book will serve those best who are actually engaged in laboratory work.

Die theoretischen Grundlagen und die praktische Verwendbarkeit der gerichtlich-medizinischen Alkoholbestimmung. Von Prof. Dr. E. M. P. Widmark, Mediz.-chem. Institut der Universität Lund, Schweden. Neue Folge, Heft 11. Fortschritte der naturwissenschaftlichen Forschung. Herausgegeben von Prof. Dr. Emil Abderhalden. Paper. Price, 14 marks. Pp. 140, with 59 illustrations. Berlin: Urban & Schwarzenberg, 1932.

This monograph deals with the methods and results of recent work by the author on the determination of alcohol in the blood for medicolegal purposes. The work is based on the demonstration by the author that the concentration and conversion of alcohol in the organism may be followed as closely and accurately as the course of a reaction in vitro. The organism simply acts as a solvent of the ingested alcohol. First there is described a micromethod for the determination of ethyl alcohol in the blood, which does not require more than 100 mg. of blood, that is, no more than can easily be obtained in a capillary glass tube from the puncture of a finger tip. The principle of the micromethod is that of the commonly used bichromate method. Next come chapters on the diffusion of alcohol in the tissues, into the fluids of the body and the expired air, and on the kinetics of the conversion of alcohol and acetone in the organism. Then is described the Swedish official system of determining alcohol in the blood for medicolegal purposes on an extended scale. Police stations everywhere have at hand boxes with glass capillary tubes for the use of physicians in taking blood from persons suspected of being under undue alcoholic influence, as in motor traffic accidents. Boxes with blood-filled tubes and the data required are sent to the central laboratory. From the middle of May, 1930, to March, 1931, about 700 samples of blood were obtained in this way from the routine investigation of traffic accidents. The results of the general examinations and the alcohol determinations in these cases are presented in detail. Thus the proportion of the coarser symptoms of alcoholic intoxication to varying concentration of alcohol in the blood has been worked out: when the alcohol in the blood reached 1 per cent by weight, a considerable proportion of the cases showed definite symptoms of intoxication. In about three fourths of the cases the blood contained more than 1.4 per cent of alcohol. Full reports of especially interesting cases are given. The value of alcohol determination of the blood and urine in necropsies is considered on the basis of experiments and of results in medicolegal necropsies. In the presence of decomposition the determination of alcohol is not worth while—alcohol is broken down by decomposition. If the amount of alcohol in the urine is about the same as that in whole blood, the indications are that the consumption took place shortly before death; but if the amount in the urine exceeds that in the blood by 30 or 40 per cent, the indications point to little or no consumption since two hours before death. More has been said than necessary to show that Widmark's book is a contribution of fundamental importance in the work on the medicolegal problems of alcohol. The presentation is a model of clearness and order. Again a small country has demonstrated how practical progress may be made through well organized cooperation between officials, physicians and the scientific expert.

Methods in Physical Education. By Jesse Feiring Williams, M.D., Professor of Physical Education at Teachers College, Columbia University, John I. Dambach, M.A., Professor of Physical Education at the University of Pittsburgh, and Norma Schwendener, M.A., Associate in Physical Education at Teachers College, Columbia University. Cloth. Price, $2.25. Pp. 222. Philadelphia: W. B. Saunders Company, 1932.

This book seems to be designed for students who are preparing to be teachers of physical education and presents considerable material that has appeared in other works by Dr. Williams, together with new material having to do more specifically with methods of presenting and supervising physical activities. Neither material nor subject is of as much importance as in most of the other Williams books, and one suspects that its appeal will be much more limited. The bases of method in physical education teaching, anatomic, physiologic, psychologic and sociological, are presented; the principles of Dewey and Thorndike are applied again to this field of education; the essentials of learning and the stimuli for learning are discussed; and then applications of general principles are made to various phases of the physical education program, such as programs for young children, class efficiency, discipline, swimming, dancing and athletics. Many persons who are working with children would be glad if they could accept in toto this optimistic quotation from the chapter on disci-

pline: "Children should wish to do those activities in which they engage. The teacher who studies the problem can control and direct the drives within his pupils; for him there are no disciplinary problems." A later statement in the same chapter presents a timely qualification, however: "Interest is a personal matter and one can never be assured that all the pupils in a class have been touched by the activity." On the whole, the book does not appear to be of great significance even to students of physical education.

Leitfaden der Pathologie und Therapie der Kampfgaserkrankungen. Von Dr. med. Otto Muntsch, Stabsarzt im Reichsheere, komdt. zum Reichsgesundheitsamt. Paper. Price, 10.50 marks. Pp. 94, with 28 illustrations. Leipzig: Georg Theme, 1932.

This monograph on the pathology and therapy of gas poisoning has as its objective the awakening of a wider interest on the part of the general medical profession toward the treatment of gas poisoning. The author seeks to bring this subject to the attention of the general practitioner, because, as he sadly admits, the probability not only of military but also of civilian exposure to war gases becomes ever greater. Under a pall of diplomatic pleasantries and assurances, every war department of the great military powers has systematically developed its gas service; the technic of the next war will merely magnify the lethal effects of a weapon which was just in its developmental strides at the end of the last one. The Chinese population of Shanghai has had a foretaste of military regard for civilian populations. Muntsch takes up in detail the effects of the commoner gases used in warfare and develops the rationale of therapy so far available. The book will be of some interest to members of the medical corps, but fortunately in our country there is no particular reason why the practitioner should devote time to this field. The subject matter is handled in a concise and clear fashion, the therapeutic suggestions are logical and practical, and the illustrations, many of which are in color, are excellent. There is a bibliography covering some of the pertinent literature.

Psychological Racketeers. By Dorothy Hazeltine Yates. Cloth. Price, $2. Pp. 232. Boston: Richard G. Badger, 1932.

Each new discovery in the field of science is likely to be adapted by quacks and exploiters for personal gain. One of the most recent developments has been the manner in which the new psychology of Freud and the practical psychology of many American teachers is being exploited by charlatans of one type or another. Obviously, the sexual side of the freudian psychology makes for the charlatan a special appeal. The quacks who work in this borderland include all sorts of psychologists, psychoanalysts, astrologers, phrenologists, spiritualists, graphologists, hypnotists, mental mystics, mind readers, mediums and mental scientists. Many of these charlatans have been described by the Bureau of Investigation of the American Medical Association. The usual "come on" is the free lecture with a special appeal to women. Frequently much is made of Hindu mysticism and magic. The great prizes offered are success in love and in business. A special appeal promises superiority to those who feel themselves inferior. In the book here under discussion, the author seems to be concerned with methods rather than with individuals, since most of the charlatans considered are not mentioned by name. One, Orlando Edgar Miller, has been repeatedly exposed in THE JOURNAL, and the author adapts this exposé to her presentation. The book contains much that is of interest, although amateurish in form and poorly published.

Handbuch der normalen und pathologischen Physiologie mit Berücksichtigung der experimentellen Pharmakologie. Herausgegeben von A. Bethe, G. v. Bergmann, G. Embden und A. Ellinger. Band XV, Hälfte 2: Correlationen 1/2. Arbeitsphysiologie II, Orientierung, Plastizität, Stimme und Sprache. Bearbeit von A. Bethe, W. v. Buddenbrock und anderen. Paper. Price, 80 marks. Pp. 835-1545, with 188 illustrations. Berlin: Julius Springer, 1931.

The last half of volume XV completes (except for the general index) this marvelous working tool in the field of normal and pathologic physiology. Twenty-three stout books make up this encyclopedic textbook of physiology in seventeen volumes. The entire set costs in the neighborhood of $460, a formidable price. However, no institution engaged in biologic research can well afford to be without it, if it is solicitous about conserving the time of its researchers. For many years to come this encyclopedia will be the standard set for rapid and authoritative references (especially of European literature). The present volume contains sections on respiration and circulation during muscular work; orientation in space among invertebrates, vertebrates and man; the sensory and motor apparatus of man as a whole; plasticity of the nervous system; plasticity of the organism on the basis of experiences in man with nervous lesions; plasticity and the doctrine of nervous centers; speech and the musical apparatus of animals and their mode of functioning; the vocal apparatus of man; the physical analysis of the voice and speech sounds; aphasia. All institutions are urged on this final occasion to favor themselves and their workers by having the entire "Handbuch" on their shelves. Its individual volumes may, however, be bought separately.

Elementary Bacteriology. By Joseph E. Greaves, M.S., Ph.D., Professor of Bacteriology, Utah Agricultural College, Logan, and Ethelyn O. Greaves, M.S. Second edition. Cloth. Price, $3.50. Pp. 535, with 138 illustrations. Philadelphia: W. B. Saunders Company, 1932.

This is essentially a reprinting of the first edition, since the changes are of minor importance. These include the mention of the electrophoretic method for determining relative virulence of certain organisms, the introduction of Bergey's classification of bacteria, a paragraph on diphtheria toxoid, and a few additions to the chapters on applied bacteriology. The book is truly a "general" bacteriology. The authors are particularly happy in their presentation of the relation of bacteria to the cycles of the various chemical elements.

Leçons cliniques sur les maladies du sang et des organes hématopoïétiques. Par Ch. Achard, professeur de clinique médicale à la Faculté de médecine de Paris. Paper. Price, 34 francs. Pp. 271, with 15 illustrations. Paris: Masson & Cie, 1931.

The interest among the profession in diseases of the blood-forming organs is reflected in the numerous works on this subject in the past few years. Many of these have dealt particularly with laboratory diagnosis and relatively few have stressed the clinical aspect. With the more accurate classification afforded by the improved methods of diagnosis, clinical observations and treatment have undergone changes. This book treats particularly the clinical phases of blood dyscrasias. The first two chapters are devoted to the hemorrhagic diseases. While the author presents a few departures in accepted methods of treatment, the pathogenesis is so incompletely understood that little advance has been made in this field. Pernicious anemia is considered with particular emphasis on some of the newer advances in therapy. Leukemia, agranulocytic angina and other blood dyscrasias are next considered. The organization of the book is essentially clinical. The author illustrates his discussion by presenting typical case histories with physical and laboratory observations. The work, while not exhaustive, is a comprehensive treatise on the clinical aspect of blood dyscrasias.

Surgical Errors and Safeguards. By Max Thorek, M.D., Surgeon-in-Chief, the American Hospital, Chicago. With a foreword by Arthur Dean Bevan, M.D., Professor and Head of the Department of Surgery, Rush Medical College of the University of Chicago. Cloth. Price, $10. Pp. 696, with 668 illustrations. Philadelphia: J. B. Lippincott Company, 1932.

The human being who is unable to learn from his mistakes is obviously little above the animal in intelligence. Indeed, this is probably the chief feature in differentiating between the human and the animal. It is quite human, however, to hide one's mistakes so that only the one who has erred benefits by the knowledge. Dr. Thorek has been exceedingly bold in the presentation of common surgical errors and analysis of their causation. He begins with a consideration of errors and safeguards in connection with surgical operations in general, including under this heading wound infections, acidosis, pulmonary complications and similar subjects. He points out the dangers of spinal anesthesia and the indications for its use and deprecates particularly snapshot diagnosis. The second chapter considers one of the most frequent alibis in medical work; namely, the bad risk patient. After a brief consideration of blood transfusion, the author discusses operations on the various parts of the body, concluding with a special chapter on defective instruments and foreign bodies left in the body during surgical procedures.

The volume is didactic, the sentences sharp and the pages frequently interspersed with heavy type, emphasizing significant

points in anatomy or procedure. The illustrations are profuse, some of them borrowed but many taken from the author's own experience. A good bibliography supplements each chapter, and two excellent indexes make reference easy. Certainly every young surgeon should benefit by the experience here set forth.

Medicolegal

Civil Liability for Results of Criminal Abortion

(Androws v. Coulter (Wash.), 1 P. (2d) 320)

Gene Raligh died after having been operated on with a view to procuring an abortion. The plaintiff, as administratrix of her estate, sued the physician who operated, to recover the expenses of the last illness and the burial of her intestate. A general demurrer, interposed by the physician, was sustained by the trial court. The plaintiff then appealed to the Supreme Court of Washington.

In the state of Washington, any one who unlawfully produces a miscarriage of a woman is guilty of abortion and may be punished by imprisonment in the penitentiary. The law provides, too, that a woman who submits to her own criminal miscarriage may be punished by imprisonment in like manner. Relying on these laws and on the general rule that courts will not aid either party in litigation growing out of criminal acts, the defendant physician contended for judgment in his favor, because the cause of action was founded on an illegal act on the part of the decedent.

There is a conflict of authority, said the Supreme Court, as to whether the rule that courts will not aid either party in litigation growing out of criminal acts shall be applied in favor of one who performs an abortion, when the woman consents and participates in the act. The court held, however, that in the state of Washington the rule is applicable. But, said the court, the complaint in this case does not charge simply an abortion and the consequent death of the woman. It contains further allegations that will permit proof that, on becoming aware that the patient on whom the abortion was performed was suffering from septicemia and peritonitis, the defendant physician wholly failed and neglected to prescribe for or treat her, and that, knowing that she was so suffering and that her life was in danger, and without letting her family know of her true condition, he wholly abandoned her. It was alleged, too, that had the defendant physician made known her true physical condition at the time it became known to him and had he given her proper attention, her death would not have occurred. Proof of the facts thus alleged would establish a cause of action. A physician and surgeon has no more right to abandon his patient under the circumstances of this case than he would had she become his patient under ordinary circumstances and in the best of faith.

The facts stated in the complaint were held to be sufficient to constitute a cause of action, and the cause was therefore reversed and remanded, with directions to the trial court to overrule the demurrer of the defendant physician.

Buerger's Disease Aggravated by Trauma

(Hall v. State Compensation Com'r. (W. Va.), 159 S. E. 516)

Hall injured the great toe of his right foot. Two amputations followed, the second removing the entire toe. The wound did not heal, but Hall undertook to work, favoring his injured foot. While doing so, he rubbed the great toe on his left foot. Infection followed, which resulted in several progressive amputations, the last just below the left knee. In the meantime, the condition of his right foot became aggravated, necessitating a series of amputations, ending just below the right knee.

After his first injury and the consequent removal of the great toe of his right foot, Hall claimed and received compensation on a 10 per cent partial disability rating. Later, after the several amputations to which he had to submit, he sought supplementary compensation for the loss of both legs. Such compensation was refused, but on appeal the Supreme Court of Appeals of West Virginia remanded the case for a further hearing. The hearing was given, but a supplemental award was again denied, on the ground that the amputations to which Hall had been subjected were due to Buerger's disease, and not to the injury that he had suffered. The case was again appealed to the Supreme Court of Appeals of West Virginia.

The physicians were in agreement, said the Supreme Court, that Hall was suffering from Buerger's disease, or thromboangiitis obliterans, an inflammatory disease of unknown origin, affecting all the coats of the arteries and the veins. Practically all the medical witnesses expressed the opinion that the disease is not caused by trauma. They admitted, however, that such an injury as the claimant suffered might excite the condition and result in a loss of parts of the body several years earlier than they would be lost if no injury occurred. If the loss of Hall's legs were due to disease, and that disease was not aggravated nor accelerated by anything that might be denominated an accident, the loss would not be compensable under the workmen's compensation act of West Virginia. On the other hand, if the injury to Hall's great toe lighted up the disease from which he was suffering and incapacitated him for the performance of his duties, he was entitled to compensation. The several amputations to which Hall was subjected were, in the opinion of the Supreme Court, due primarily to the accident. The case was therefore remanded to the state compensation commissioner, with directions to fix the percentage of disability in accordance with the statute, based on the loss of both legs.

Society Proceedings

COMING MEETINGS

American Association for the Study of Goiter, Hamilton, Ontario, June 14-16. Dr. J. R. Yung, 670 Cherry St., Terre Haute, Ind., Secretary.
American Association for the Study of the Feeble-Minded, Philadelphia, May 26-29. Dr. Groves B. Smith, Godfrey, Illinois, Secretary.
American Association of Genito-Urinary Surgeons, Niagara Falls, Ontario, Canada, May 26-28. Dr. Henry L. Sanford, 1621 Euclid Avenue, Cleveland, Secretary.
American Gynecological Society, Quebec, May 30-June 1. Dr. Otto H. Schwarz, 630 South Kingshighway, St. Louis, Secretary.
American Laryngological, Rhinological and Otological Society, Atlantic City, May 23-25. Dr. Robert L. Loughran, 33 East 63d Street, New York, Secretary.
American Neurological Association, Atlantic City, June 6-8. Dr. Henry Alsop Riley, 117 East 72d Street, New York, Secretary.
American Ophthalmological Society, New London, Conn., June 27-29. Dr. Emory Hill, 501 East Franklin Street, Richmond, Va., Secretary.
American Orthopedic Association, Toronto, Canada, June 15-18. Dr. DeForest P. Willard, 1916 Spruce Street, Philadelphia, Secretary.
American Pediatric Society, Rochester, Minnesota, May 26-28. Dr. Hugh McCulloch, 500 South Kingshighway, St. Louis, Secretary.
American Psychiatric Association, Philadelphia, May 30-June 3. Dr. Clarence O. Cheney, 722 West 168th Street, New York, Secretary.
American Urological Association, Toronto, May 30-June 2. Dr. Gilbert J. Thomas, 1009 Nicollet Avenue, Minneapolis, Secretary.
Conference of State and Provincial Health Authorities of North America, Washington, D. C., June 2-6. Dr. A. J. Chesley, State Board of Health, St. Paul, Minnesota, Secretary.
Connecticut State Medical Society, New Haven, May 25-26. Dr. Charles W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.
Maine Medical Association, Rangeley, June 16-18. Dr. Philip W. Davis, 22 Arsenal Street, Portland, Secretary.
Massachusetts Medical Society, Boston, June 8-10. Dr. Walter L. Burrage, 182 Walnut Street, Brookline, Secretary.
Medical Library Association, San Francisco, June 20-22. Miss Marjorie J. Darrach, 645 Mullett Street, Detroit, Secretary.
Minnesota State Medical Association, St. Paul, May 23-25. Dr. E. A. Meyerding, 11 West Summit Avenue, St. Paul, Secretary.
Missouri State Medical Association, Jefferson City, May 23-26. Dr. E. J. Goodwin, 634 North Grand Boulevard, St. Louis, Secretary.
Montana, Medical Association of, Miles City, July 13-14. Dr. E. G. Balsam, 208 North Broadway, Billings, Secretary.
National Tuberculosis Association, Colorado Springs, June 6-9. Dr. Charles J. Hatfield, 7th and Lombard Streets, Philadelphia, Secretary.
Nebraska State Medical Association, Lincoln, May 24-26. Dr. R. B. Adams, Center McKinley Building, Lincoln, Secretary.
New Jersey, Medical Society of, Atlantic City, June 15-17. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.
New York, Medical Society of the State of, Buffalo, May 23-25. Dr. Daniel S. Dougherty, 2 East 103d Street, New York, Secretary.
North Dakota State Medical Association, Grand Forks, June 1-2. Dr. Albert W. Skelsey, 18 Broadway, Fargo, Secretary.
Oklahoma State Medical Association, Tulsa, May 24-26. Dr. Claude A. Thompson, Manhattan Building, Muskogee, Secretary.
Pacific Northwest Medical Association, Spokane, Wash., June 27-29. Dr. Frederick Epplen, 1215 Fourth Avenue, Seattle, Secretary.
Rhode Island Medical Society, Providence, June 2. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.
South Dakota State Medical Association, Watertown, June 20-22. Dr. John F. D. Cook, Langford, Secretary.
Western Branch of the American Urological Association, Portland, Ore., July 1-2. Dr. F. S. Dillingham, 548 S. Spring Street, Los Angeles, Secretary.
West Virginia State Medical Association, Parkersburg, June 21-23. Mr. J. W. Savage, Professional Building, Charleston, Executive Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Issues of periodicals are kept on file for a period of five years only. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending, but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Journal of Surgery, New York

15: 435-638 (March) 1932

Prostate at Crossroad. J. F. McCarthy, New York.—p. 435.
*Bone Sarcoma: Intramedullary Injections of Virus of Filtrable Fowl Endothelioma Tumor. R. F. Berg, Portland, Ore., with Foreword by W. B. Coley, New York.—p. 441.
Combined Roentgenologic and Clinical Differential Diagnosis of Benign and Malignant Lesions of Stomach. B. R. Kirklin and G. B. Eusterman, Rochester, Minn.—p. 462.
*Factors Influencing Prognosis in Medical Treatment of Duodenal Ulcer. Sara M. Jordan and E. D. Kiefer, Boston.—p. 472.
Diarrhea of Unknown Origin. P. W. Brown, Rochester, Minn.—p. 483.
Diagnosis of Jaundice: Value of Clinical and Laboratory Data. J. F. Weir, Rochester, Minn.—p. 494.
Psychiatric Aspects of Gastro-Enterology. A. Meyer, Baltimore.—p. 504.
Acute Pancreatitis: Acute Hemorrhagic Pancreatic Necrosis. C. R. Jones, Pittsburgh.—p. 510.
*Unusual and Common Forms of Bacterial Dysentery Observed in the South. D. N. Silverman and W. H. Harris, New Orleans.—p. 515.
Studies in Gastric Secretion: Preliminary Note on New Method of Therapy for Peptic Ulcer. A. Winkelstein, New York.—p. 523.
*Combined Oral and Intravenous Cholecystography. P. B. Davidson, F. Biguria and J. Rosenthal, Boston.—p. 525.
A Urinary Antiseptic: Clinical Report. C. Rusche, Hollywood, Calif. —p. 545.
Tidal Irrigation and Suction Apparatus for Empyema. R. H. Overholt, Boston.—p. 548.
Unusual Case of Tuberculosis of Trochanteric Region: Bone Infection Near the Joint. E. D. W. Hauser, Chicago.—p. 551.

Bone Sarcoma.—In summarizing the results of his experiments, Berg calls attention to his artificial production of malignant tumors derived from filtrates of dried tumor tissue. From the artificially produced tumor tissue filtrates, other malignant tumors were produced which were dissimilar in respect to morphology, histology and dissemination of metastatic nodules. Culture of dried tissue, and filtrate on usual mediums showed no growth, but on special mediums positive cultures were obtained in all tubes with the dried tumor tissue, and one showed growth with the filtrate. The tumors produced were classified from roentgen, gross, histologic and clinical examinations in the following types: (1) endotheliomas, (2) endothelial myeloma, (3) osteogenic sarcoma, (4) giant cell tumor and (5) epithelial tumor.

Prognosis in Medical Treatment of Duodenal Ulcer.—Jordan and Kiefer report that nearly half of all cases of duodenal ulcer treated medically have one or more recurrences within a period of five years after treatment. About one fifth of the recurrences can be ascribed to carelessness on the part of the patient. A little over one fourth of the remaining recurrences are characterized by gross hemorrhage, which is not associated with pain or other important symptoms. Among the clinical features that are manifest in the examination and treatment of cases of duodenal ulcer, there are some with important prognostic significance, others with suggestive but inconclusive prognostic value, and others which give no aid whatever in estimating the probability of success or failure of medical treatment. The two features that are important enough to be useful in planning treatment for the individual patient are, first, the history of two or more gross hemorrhages, and, second, the demonstration of a marked intolerance to alkali therapy. Among the features characteristically more common in cases that are ultimate failures on medical treatment but are not sufficiently important to make them conclusive indication for or against medical management are failure of the duodenal cap to show improvement in outline after treatment, the six-hour retention of barium in the stomach particularly if still present at the end of three weeks' hospital treatment, a history of one gross hemorrhage, a marked resistance to neutralization of the gastric contents with alkali therapy, occult blood in the stools particularly if there is a tendency to persist on treatment, and the physical observations of hypertension and epigastric tenderness. The features that have little or no prognostic value are age, sex, age at the onset of symptoms, duration of the disease, severity of pain, degree of deformity of the duodenal cap at the first examination if there is no six-hour residue, and the degree of hyperacidity after an Ewald meal. Improvement in the roentgen appearance of the duodenal cap was found to be the most reliable single objective test as a guide to medical management. Alkalosis was found to be associated in a large proportion of cases with hypertension, other evidences of chronic vascular nephritis, and obstructive surgical lesions in the urinary tract.

Bacterial Dysentery Observed in the South.—Silverman and Harris have encountered several varieties of bacterial dysentery in a survey of approximately 100 cases of this disease. The bacillary types, especially the strains of Flexner, Shiga and Duval, are endemic in the South and appear to be increasing in incidence. Recent reports from northern sections of the country would warrant careful investigation of suspicious cases for the possible determination of a wider dissemination of bacillary dysentery than is at present suspected. Several unusual types of bacterial dysentery, in some instances with few previous clinical or bacteriologic descriptions, are found to exist in the South.

Combined Oral and Intravenous Cholecystography.—According to Davidson and his associates, cholecystography by the combined oral and intravenous method presents an accuracy comparable to that of the intravenous method. It produces a higher incidence of filling and denser shadows than the oral method. Reactions are infrequent; those present are apparently due to the dose taken by mouth. It is time saving, requiring but little more than the oral method yet requiring no repeat examinations. Cholecystography by the combined oral and intravenous method is the most satisfactory means of studying ambulatory cases.

Archives of Ophthalmology, Chicago

7: 357-498 (March) 1932

Ocular Injuries: Their Treatment. G. H. Cross, Chester, Pa.—p. 357.
Prognosis of Certain Eye Injuries. E. S. Sherman, Newark, N. J.—p. 361.
Workmen's Compensation Problems. V. A. Zimmer, New York.—p. 367.
*Ophthalmologic Importance of Focal Infective Prostatitis. P. S. Pelouze, Philadelphia.—p. 372.
Ioskiascopy Test. J. I. Pascal, Boston.—p. 378.
Ways in Which Distance of Test Field Affects Determinations of Retinal Sensitivity. C. E. Ferree and G. Rand, Baltimore.—p. 383.
*Homatropine and Atropine Cycloplegia: Comparative Study. L. Bothman, Chicago.—p. 389.
Correction of High Myopia by Mueller's Contact Glasses. N. Blatt, Targu-Mures, Roumania.—p. 399.
Orbital Metastases from Malignant Tumors of Suprarenal Gland. F. E. Burch, St. Paul.—p. 418.
Eyes of Irradiated Human Embryos: Further Observations. I. Goldstein and D. Wexler, New York.—p. 434.

Focal Infective Prostatitis.—Pelouze believes that the general focal infective triad in the male is teeth, tonsils and prostate. In eye conditions the facial sinuses also play a part. Focal infective eye conditions occasionally are due solely to infections of the prostate. They commonly are kept up by prostatic infections after the removal of foci in the teeth, tonsils and sinuses. Such prostatic infections usually are secondary to tonsillar or dental infections and only rarely have any relation to gonococcal infection. At least 35 per cent of all men beyond the age of 35 have a prostatic infection. At least 72 per cent of all men with focal infective symptoms have an infected prostate. These prostatic infections cannot be permanently cured so long as their causal foci in the teeth or tonsils persist. An increase in ocular symptoms usually follows one of the first digital manipulations of the gland. If no such increase occurs, the gland is practically acquitted as a factor in the causation of the eye lesions. This increase in ocular symptoms is analogous to a vaccine reaction with marked specificity for the distant lesion caused by the prostatic infection. Treatment of the gland, therefore, must be viewed from the standpoint of ocular tolerance to toxin. To exceed this threshold of toxin tolerance is to incur great risk. Recovery from such ocular conditions is retarded by severe reactions and

hastened by treatment causing the slightest or no reaction. Prostatic massage should not be carried out oftener than twice a week. It should not be repeated within three days of the subsidence of a reaction caused by a previous treatment. If the eye condition improves as the result of prostatic massage and then remains stationary, there probably is a recurrent dental infection, the supposedly normal tonsils are in reality infected ones, or there is further trouble in a facial sinus. If the eye condition becomes worse as the result of prostatic massage of the gentlest type, it is evident that the toxin threshold is so low that the prostatic manipulations should be stopped until the eye condition reaches a stationary stage or definitely improves. Few methods of treatment require more judgment and restraint than does the attack of a prostatic infection in the presence of a focal infective eye lesion.

Homatropine and Atropine Cycloplegia.—Bothman describes experiments in which he demonstrated that atropine is a better cycloplegic than homatropine. He believes that it should be used more in refraction, especially in myopia. When persons with good unaided vision accept weak minus corrections under homatropine, refraction should be done under atropine.

Canadian Medical Association Journal, Montreal

26: 273-392 (March) 1932

Diagnosis and Treatment of Milder Affective Disorders (Depressions and Elations). L. F. Barker, Baltimore.—p. 273.
Relation of Tuber Cinereum to Gastric and Cardiac Functions: Preliminary Note. J. Beattie, Montreal.—p. 278.
*Glycosuria in Pregnancy. Lillian A. Chase, Regina, Sask.—p. 279.
*Pregnancy Glycosuria and Prenatal Care. V. J. Harding and D. L. Selby, Toronto.—p. 283.
*Discussion on Etiology and Specific Treatment of Arthritis. F. T. Cadham, Winnipeg, Manit.—p. 287.
Intestinal Erepsin and Phosphatase of Infants with Acute Intestinal Intoxication. G. E. Hall, E. J. King, J. R. Ross and M. M. Shaw, Toronto.—p. 293.
*Effect of Irradiated Foods on Calcium and Phosphorus Metabolism. T. G. H. Drake and F. F. Tisdall, Toronto.—p. 296.
Phlyctenular Conjunctivitis in Relation to Tuberculosis in Children. H. I. Kinsey, Toronto.—p. 298.
What Can Be Done in Some Cases of Advanced Malignant Disease? L. J. Carter and R. P. Cromarty, Brandon, Manit.—p. 302.
Tularemia: Report of Case. R. M. Shaw and H. C. Jamieson, Edmonton, Alta.—p. 305.
Chest Radiography and the Practitioner. P. M. Andrus, London, Ont.—p. 308.
Amebic Liver Abscess. Florence J. Murray and P. K. Koh, Ham Heung, Korea, Japan.—p. 312.
Thrombosis of Cerebral Vessels in Infants. R. Simpson, Toronto.—p. 317.
Iodine Poisoning and Iodism from Lipiodol. D. A. Carmichael, Ottawa, Ont.—p. 319.
Modified Tonsillectomy Procedure. C. K. Fuller, Yarmouth, N. S.—p. 321.

Glycosuria in Pregnancy.—Chase found sugar in 66 of 100 urinalyses of pregnant patients. One patient who did 100 urinalyses found sugar 47 times. The earliest time in pregnancy that sugar was found was two months. Sugar tolerance curves were done on three pregnant patients and on three patients in whom glycosuria had persisted after delivery; the curves were similar to those found in persons with renal glycosuria. On the basis of her observations, the author concludes that glycosuria in pregnancy is normal. Its frequency depends on how thoroughly it is sought. It does not require dietetic treatment and probably does not predispose to the development of diabetes. It is differentiated from diabetes by the small amount of sugar present, by the absence of thirst, and by the presence of normal blood sugar curves.

Pregnancy Glycosuria and Prenatal Care.—Harding and Selby believe that if all pregnancies or a high percentage of pregnancies show glycosuria and are physiologic in character it seems unnecessary from the purely clinical standpoint to distinguish between a glycosuria and a lactosuria, as usually recommended. If the distinction between dextrose and lactose were readily and clearly made, the authors would advise otherwise, on the grounds of completeness of data. In view of the uncertainty of the distinction by the present suggested tests, they think the wiser course is to assume the presence of a glycosuria.

Etiology and Specific Treatment of Arthritis.—Cadham has had the opportunity to observe the effects of treatment with autogenous vaccines of some ninety patients suffering from chronic polyarthritis. In over eighty of these patients the use of the vaccine was followed by some amelioration of the symptoms, and in many cases by complete relief; a few patients showed no benefit.

Effect of Irradiated Foods on Calcium and Phosphorus Metabolism.—Drake and Tisdall report that the administration of vitamin D in the form of irradiated muffets and farina to children from 9 to 11 years of age on a low calcium diet resulted in an increased efficiency in the utilization of calcium and phosphorus. Also the results furnish further evidence of the importance of vitamin D in human metabolism at periods other than infancy.

Illinois Medical Journal, Chicago

61: 181-268 (March) 1932

*Correlation of Clinical Manifestations and Pathologic Changes in Nephritis. J. P. Simonds, Chicago.—p. 201.
Complete Separation of Mucosa of Gallbladder from Overlying Structures: Report of Case. E. S. Judd, Rochester, Minn., and C. B. Puestow, Chicago.—p. 204.
Disease of Orbit. M. Goldenburg, Chicago.—p. 205.
Nonvenereal Prostatitis. M. J. Freeman, Chicago.—p. 211.
The Old and the New in Medicine and Surgery. W. S. Bainbridge, New York.—p. 213.
Thyroidectomy, with Especial Reference to Factors Concerning Mortality. R. F. Weissbrenner, Chicago.—p. 216.
History of Development of Physiology in United States. C. I. Reed, Chicago.—p. 220.
Spinal Anesthesia in Gynecology. A. Gabrielianz, Chicago.—p. 226.
Precipitating Factors in Mental Disorders. S. N. Clark, Jacksonville.—p. 230.
Postoperative Patient. N. N. Crohn, Chicago.—p. 235.
*Atypical Scarlet Fever. A. I. Love, Chicago.—p. 238.
Arthritis: Systemic Disease. E. F. Traut, Oak Park.—p. 241.
Tularemia in Chicago: Report of Six Surgical Cases. H. Jackson and B. Seid, Chicago.—p. 243.
*Edema of Larynx: Its Etiology and Treatment. C. D. Sneller, Peoria.—p. 246.
Etiologic Relationship of Certain Grain Fungi to Acrodynia, Thrombo-Angiitis Obliterans and Related Conditions. J. Klein, Chicago.—p. 254.
Cervical Phlegmon Following Local Tonsillectomy: Report of Four Cases. J. W. Hayden, Chicago.—p. 257.
Traumatic Lesions of Urogenital Tract. C. M. McKenna, Chicago.—p. 259.
Rôle of Orthopedic Surgery in Infantile Paralysis. J. L. Porter, Evanston.—p. 262.

Correlation of Clinical Manifestations and Pathologic Changes in Nephritis.—Simonds believes that for practical purposes, both clinical and pathologic, nephritis can be conveniently divided into two main groups: the cases in which the primary damage is to the secretory portion of the kidneys, and those in which the primary lesion is in the smaller arteries and arterioles. Cases of the first type may be acute, subacute or chronic and have been variously termed parenchymatous nephritis, glomerulonephritis and nephrosis; those of the latter group are practically always chronic and include the so-called chronic interstitial nephritis and arteriosclerotic, primary and genuine contracted kidneys. These two groups are each characterized by definite morphologic changes in the kidneys and each affects the functions of these organs in a different manner. In the first type the secretory portion of the kidneys is primarily damaged. The effect of this on the functions of these organs is to increase the permeability of their filtration apparatus. There is no retention of waste products in the blood or of dye in renal function tests, but a retention of crystalloids in the tissues, perhaps as a sort of compensatory mechanism, with resultant edema. In the second type the secretory portion is not primarily damaged. The alteration in function is due to disturbances in the circulation through the arterioles with reduction in blood volume and blood pressure, and, therefore, of available filtration pressure, within the glomeruli. An increase in systemic blood pressure temporarily compensates for this condition, but sooner or later retention of waste products in the blood occurs. The increased quantity of urine of low specific gravity is the result of inadequate absorption by the tubules because of interference with their nutrition. In the treatment of these two types, quite different methods would appear to be rational. In the first type a high protein diet should aid in restoring the depleted serum albumin. Reduction of water intake and of salt in the diet should aid in relieving the edema. In the second type a high protein diet would add to the nitrogenous waste products, which the kidneys are already unable adequately to excrete. Normal or abundant water intake might aid in flushing out the accumulated waste products.

Atypical Scarlet Fever.—Love calls attention to the fact that the character of scarlet fever has changed in recent years and a mild atypical form is very prevalent. Careful examination and prolonged observation is often necessary to diagnose these cases. Early diagnosis and recognition of the mild atypical case is a great factor in preventing the spread of scarlet fever.

Edema of Larynx.—According to Sneller, laryngeal edema, producing acute laryngeal obstruction, is caused by or associated with a great variety of conditions and diseases. It is the most frequent cause of acute laryngeal obstruction. An early diagnosis of the cause is essential for the most efficient treatment of the laryngeal obstruction. The degree of acute laryngeal obstruction has no direct relation to the seriousness of the condition or disease. Tracheotomy is preferable, particularly in acute laryngotracheobronchitis, when secretions become tenacious and abundant. Intubation may be preferable if edema is not great, if duration of intubation is short, and if tracheobronchial secretions are not tenacious and abundant. The prognosis is more dependent on the general toxemia than on the laryngeal obstruction itself, provided this is relieved fairly early.

Journal of Clinical Investigation, Baltimore

11: 249-454 (March) 1932

*Intravenous Injections: Study of Composition of Blood During Continuous Trauma to Intestines When No Fluid Is Injected and When Fluid Is Injected Continuously. J. W. Beard and A. Blalock, Nashville, Tenn.—p. 249.

Id.: Study of Effects on Composition of Blood of Injection of Various Fluids into Dogs with Normal and with Low Blood Pressures. A. Blalock, J. W. Beard and C. Thuss, Nashville, Tenn.—p. 267.

Study of Effects of Hemorrhage, Trauma, Histamine and Spinal Anesthesia on Composition of Blood When No Fluids Are Injected and When Fluids Are Introduced Intravenously. J. W. Beard, H. Wilson, B. M. Weinstein and A. Blalock, Nashville, Tenn.—p. 291.

Effects on Composition of Blood of Subcutaneous Injection of Normal Salt Solution into Normal Dogs and into Dogs Subjected to Intestinal Trauma, Graded Hemorrhages and Histamine Injection. A. Blalock and J. W. Beard, Nashville, Tenn.—p. 311.

*Studies in Metabolism of Sodium r-Lactate: I. Response of Normal Human Subjects to Intravenous Injection of Sodium r-Lactate. A. F. Hartmann and M. J. E. Senn, St. Louis.—p. 327.

Id.: II. Response of Human Subjects with Acidosis to Intravenous Injection of Sodium r-Lactate. A. F. Hartmann and M. J. E. Senn, St. Louis.—p. 337.

Id.: III. Response of Human Subjects with Liver Damage, Disturbed Water and Mineral Balance, and Renal Insufficiency to Intravenous Injection of Sodium r-Lactate. A. F. Hartmann and M. J. E. Senn, St. Louis.—p. 345.

*Celluloid Capsule for Measuring Venous Pressures. A. Krogh, A. H. Turner and E. M. Landis, Copenhagen, Denmark.—p. 357.

Cutaneous Respiration in Man: IV. Rate of Carbon Dioxide Elimination and Oxygen Absorption in Normal Subjects. A. C. Ernstene and Marie C. Volk, Boston.—p. 363.

Id.: V. Rate of Carbon Dioxide Elimination and Oxygen Absorption in Subjects with Diseases of Skin. A. C. Ernstene and Marie C. Volk, Boston.—p. 377.

*Id.: VI. Effect of Drugs on Rate of Carbon Dioxide Elimination and Oxygen Absorption. A. C. Ernstene and Marie C. Volk, Boston.—p. 383.

Id.: VII. Effect of Venous Congestion on Rate of Carbon Dioxide Elimination and Oxygen Absorption. A. C. Ernstene and Marie C. Volk, Boston.—p. 387.

Studies of Calcium and Phosphorus Metabolism: XIV. Relation of Acid-Base Balance to Phosphate Balance Following Ingestion of Phosphates. W. T. Salter, R. F. Farquharson and Dorothy M. Tibbetts, Boston.—p. 391.

*Studies in Parathyroid Physiology: III. Effect of Phosphate Ingestion in Clinical Hyperparathyroidism. F. Albright, W. Bauer, Dorothy Claflin and Jessie Reed Cockrill, Boston.—p. 411.

Specific Dynamic Response to Protein of Individuals Suffering from Disease of the Hypophysis. Margaret Woodwell Johnston, Ann Arbor, Mich.—p. 437.

*Stimulation of Gastric Pepsin by Histamine. W. S. Polland, San Francisco.—p. 449.

Intravenous Injections.—Beard and Blalock performed all their experiments on dogs that were deeply anesthetized by sodium barbital. Shock was produced by continuously passing the intestine between the fingers. Blood serum and the fluid that escaped into the peritoneal cavity were collected frequently for the studies. In the first group of experiments, studies were performed on the blood serum and the peritoneal fluid during continuous trauma to the intestine. No fluid was administered. Among the observations were the following: 1. There was a great diminution in the volume of plasma in the circulation. 2. The protein content per unit volume of serum remained approximately the same throughout the experiments. 3. The total protein content of the blood serum and of the peritoneal fluid was approximately the same in all instances. 4. The content in albumin of the peritoneal fluid was usually greater than that of the blood serum and the content in globulin was less. In the second group of experiments, various solutions were injected intravenously at a constant speed while the intestine was being traumatized. Among the observations were the following: 1. The total protein content of the blood serum and of the peritoneal fluid that were collected simultaneously was approximately the same in all experiments. 2. The albumin content of the peritoneal fluid was usually greater than that of the blood serum, while the globulin content was less. 3. The injection of solutions of sodium chloride and dextrose was usually associated with a decrease in the percentage of protein per unit volume of serum, a diminution of the volume of plasma in the circulation and a great decrease in the absolute plasma protein. 4. When solutions of acacia were injected, there was a decrease in the percentage of protein, an increase in the plasma volume and a decrease in the absolute amount of plasma protein. 5. The injection of blood serum was usually associated with comparatively small alterations in the percentage of protein, the volume of plasma and the absolute amount of plasma protein. 6. When whole blood was injected, there was very little alteration in the percentage of protein in the blood serum. Since there was a tremendous increase in concentration of the blood, there was probably a rather large reduction in the plasma volume and in the absolute amount of plasma protein.

Studies in Metabolism of Sodium r-Lactate: I.—In seven essentially normal children Hartmann and Senn studied the effects of the intravenous injection of from 4 to 7 cc. of molar solution of sodium r-lactate per kilogram of body weight, with the following results: 1. The racemic mixture is practically completely metabolized in from one to two hours. 2. The conversion of lactate into dextrose is apparent from the uniform rise of the latter in the blood. 3. The liberation of the sodium ion is practically quantitative, the base appearing in the body fluids chiefly as sodium bicarbonate. 4. Excretion of excess base into the urine takes place promptly, and alkalosis is usually of short duration. 5. During the period of alkalosis, no signs of tetany were noted.

Celluloid Capsule for Measuring Venous Pressures.—Krogh and his associates describe a celluloid capsule for the determination of venous pressures. This is easily made, and notches can be cut so that it will fit any arrangement of veins. It is cemented to the skin with collodion. When with high venous pressures the necessarily high intracapsular pressure would cause distortion of the skin and erroneous readings, the error can be avoided by the use of a counter-weighting clamp, also described. Such a counterweight is usually needed for the measurement of venous pressures above 30 cm. water pressure.

Cutaneous Respiration in Man: VI.—Ernstene and Volk made measurements of the effect of epinephrine, pituitary posterior lobe extract, histamine and pilocarpine on the rate of cutaneous respiration in three normal subjects. None of the drugs significantly altered the rate of carbon dioxide elimination and oxygen absorption through the skin. The failure to affect the rate of cutaneous respiration indicates that the drugs did not significantly alter the metabolic rate of the skin or the tension of the gases in that portion of the blood in equilibrium with the tissues.

Studies in Parathyroid Physiology.—Albright and his associates treated three patients with clinical hyperparathyroidism by ingestion of phosphates with beneficial results. The metabolic sequelae of such treatment are: (1) almost complete absorption of phosphates into the blood stream; (2) rapid excretion of the absorbed phosphates by the kidneys; (3) a rise of the previously low serum phosphorus; (4) a fall of the previously elevated serum calcium; (5) a rise at first of the calcium × phosphorus product in the serum; and (6) a fall of the urinary calcium excretion. The net result is an increase in the balances of calcium and phosphorus and a return of the serum levels of both in the direction of normal. The rapidity with which the absorbed phosphorus is excreted in the urine and the resistance which the low serum phosphorus exhibits to being raised suggest that the threshold for phosphorus excretion into the urine is lowered in hyperparathyroidism, and

the authors consider this the most fundamental change in the calcium and phosphorus metabolism in this condition. It appears that in long standing hyperparathyroidism there is increased absorption of calcium and phosphorus from the gastro-intestinal tract and that excretion of calcium into the gastro-intestinal tract is not a threshold phenomenon dependent on the level of serum calcium.

Stimulation of Gastric Pepsin by Histamine.—Polland presents evidence to show that, in human subjects, histamine stimulates secretion of gastric pepsin. The character of the pepsin curve and the similarity of the response after the second and third injections of histamine can be interpreted satisfactorily only by assuming that histamine stimulates the peptic cells. The effect after the first stimulus is probably best explained by a mechanical lavaging of pepsin which has accumulated in the furrows and tubules of the gastric mucosa plus an actual stimulating effect by the histamine. Therefore it appears that, in studying gastric secretion in human subjects, histamine is suitable for determining the capabilities of the pepsin-secreting glands as well as the acid-secreting glands. Although the two processes are independent, they are influenced by the same stimulus.

Journal of Experimental Medicine, Baltimore

55: 325-504 (March) 1932

*Carbohydrates Adsorbed on Colloids as Antigens. J. Zozaya, Glen Olden, Pa.—p. 325.
Immunologic Reactions Between Dextran Polysaccharide and Some Bacterial Antiserums. J. Zozaya, Glen Olden, Pa.—p. 353.
*Determination of Lung Volume by Respiration of Oxygen Without Forced Breathing. J. Sendroy, Jr., Alma Hiller and D. D. van Slyke, New York.—p. 361.
Factors Affecting Yield of Specific Enzyme in Cultures of Bacillus Decomposing Capsular Polysaccharide of Type III Pneumococcus. R. Dubos, New York.—p. 377.
*Action of Specific Enzyme on Dermal Infection of Rabbits with Type II Pneumococcus. K. Goodner, R. Dubos and O. T. Avery, New York.—p. 393.
Brain to Brain Transmission of Submaxillary Gland Virus in Young Guinea-Pigs. N. P. Hudson and F. S. Markham, Chicago.—p. 405.
Vessels Involved in Hydrostatic Transudation. P. D. McMaster and S. Hudack, New York.—p. 417.
Gradient of Permeability of Skin Vessels as Influenced by Heat, Cold and Light. S. Hudack and P. D. McMaster, New York.—p. 431.
Properties of Causative Agent of Chicken Tumor: II. Inactivation of Tumor-Producing Agent by Monochromatic Ultraviolet Light. E. Sturm, F. L. Gates and J. B. Murphy, New York.—p. 441.
*Association of Pneumococci, Hemophilus Influenzae and Streptococcus Hemolyticus with Coryza, Pharyngitis and Sinusitis in Man. L. T. Webster and A. D. Clow, New York.—p. 445.
Effect of Testis Extract on Growth of Transplantable Mouse Tumors. R. C. Tanzer, New York.—p. 455.
Studies on Nature of Agent Transmitting Leukosis of Fowls: I. Its Concentration in Blood Cells and Plasma and Relation to Incubation Period. J. Furth, Philadelphia, with assistance of C. Breedis and Ruth Klingelhofer.—p. 465.
Id.: II. Filtration of Leukemic Plasma. J. Furth and A. K. Miller, Philadelphia, with assistance of C. Breedis.—p. 479.
Id.: III. Resistance to Desiccation, to Glycerin, to Freezing and Thawing; Survival at Ice Box and Incubator Temperatures. J. Furth, Philadelphia, with assistance of Clara B. Taylor and C. Breedis.—p. 495.

Carbohydrates Adsorbed on Colloids as Antigens.—Zozaya presents evidence that polysaccharides can be rendered antigenic by haptogenic adsorption on a colloid carrier. The polysaccharides studied were those of Bacillus anthracis, the meningococcus, Streptococcus viridans (Bargen), Bacillus proteus, Bacterium morgani, Bacillus dysenteriae, both the Shiga and Hiss types, and the pneumococci. With the polysaccharide of type III pneumococci, the author was unable in six weeks to produce any detectable protective antibodies, but he was able to produce anticarbohydrate antibodies. All the bacterial carbohydrates were nonantigenic alone when used in the doses indicated, though containing some nitrogen. Dextran, which was free from nitrogen, was also rendered antigenic by the adsorption method.

Determination of Lung Volume by Respiration of Oxygen Without Forced Breathing.—Sendroy and his associates describe a method for estimating the volume of air in the lungs by the familiar principle of mixing this air with a measured volume of oxygen, and determining the extent to which the nitrogen of the pulmonary air is diluted. By employing a scrubber to remove carbon dioxide, and by measuring the volume of gas in the extrapulmonary part of the system at the end instead of the beginning of the respiratory period, it is possible to prolong the period to as many minutes as are necessary for complete mixture of the gases, and thereby to carry out the estimation without forced breathing. The determination can be carried out with the Roth-Benedict or Krogh spirometer, described by the authors, assembled from ordinary laboratory equipment. The method gives the same results as the hydrogen method of Van Slyke and Binger, and obviates the use and analysis of hydrogen. The relative advantages of the two methods are discussed.

Action of Specific Enzyme on Dermal Infection with Type II Pneumococcus.—The action of the enzyme which specifically decomposes the capsular polysaccharide of type III pneumococcus was tested by Goodner and his associates in type III pneumococcus dermal infections in rabbits. When injected in sufficient amounts, this enzyme is capable of bringing about a favorable and early termination of the experimental disease, which ordinarily is fatal in nearly all instances. The results of the study yield further evidence that the capsular substance is of great importance in pneumococcus infection, since, in so far as known, the only action of which the specific enzyme is capable is that of decomposing the capsular polysaccharide.

Coryza, Pharyngitis and Sinusitis in Man.—According to Webster and Clow, persons free of pneumococci, Hemophilus influenzae and Streptococcus hemolyticus are in general free of coryza, sore throat, and influenzal and sinus attacks; persons who are occasional or periodic carriers of these organisms may be negative on tests over long healthy periods but generally become positive during or following attacks and subsequently become negative again; finally, persons who are chronic carriers show during these illnesses increasing numbers of organisms in the throat and extension of the organisms to the nose. The authors made an addition to the knowledge of the mode of spread of these organisms. A focus of growth and dissemination was determined in the nasal passages and throat of individuals with chronic disease of the upper respiratory tract, and increases in numbers of the organisms at the focus and their spread to contacts were related to the winter season and to the occurrence of symptoms in the carrier. The observations suggest that the dosage of these organisms in a community is controlled by the resistance of the carrier and of the contacts. This view is in agreement with the facts derived from studies of native animal infections.

Michigan State M. Soc. Journal, Grand Rapids

31: 173-242 (March) 1932

Specialism: Its Ideals and Standards. J. M. Robb, Detroit.—p. 173.
Transurethral Prostatic Resection: Recent Development in Genito-Urinary Surgery: Preliminary Report. R. M. Nesbit, Ann Arbor.—p. 176.
Sociological Aspects of Contraception. H. S. Collisi, Grand Rapids.—p. 178.
Gallbladder Surgery in Aged. W. L. Hackett, Detroit.—p. 182.
Bone Grafting: Some Fundamental Principles. V. L. Hart, Ann Arbor.—p. 184.
*Appendicitis Under Two Years. R. M. Kempton, Saginaw.—p. 188.
*Rehabilitation of Patients with Infantile Paralysis. N. Capener, Ann Arbor.—p. 191.
Sodium Amytal in Treatment of Toxemia of Pregnancy. R. Kennedy, Detroit.—p. 197.
Renal Tuberculosis with Anuria Due to Calculus Disease. G. Sewell, Detroit.—p. 199.
Famous Men in Medical History: John Shaw Billings. H. J. Faul.—p. 204.
Michigan's Department of Health. C. C. Slemons, Lansing.—p. 212.

Appendicitis Under Two Years.—Kempton emphasizes the fact that the possibility of appendicitis should be kept in mind regardless of age. Appendicitis is a rare disease in the first year of life, somewhat more frequent in the second year, and gradually increases in frequency during the years of early childhood and young adult life. Owing to indefinite symptoms, difficulty of careful abdominal palpation and failure to have the condition in mind, it is likely that many cases go undiagnosed during the first two years of life. Abdominal palpation, together with white and differential blood counts, should be routine in all cases with symptoms of vomiting or abdominal pain. Rectal examination and examination under light anesthesia may be useful aids in making the diagnosis.

Rehabilitation of Patients with Anterior Poliomyelitis.—Capener believes that every case of anterior poliomyelitis demands, in its treatment, the cooperation of an orthopedic surgeon at the earliest possible date. Careful anatomic and physiologic studies must be made if adequate measures are to be taken in the prevention of deformities and loss of function.

In the reeducation of paralyzed muscles, the most valuable physical therapeutic measure is the warm brine bath. In the acute stage, irritative physical therapy is to be condemned. The optimum position of joints for the return of muscle function is discussed and apparatus described for the retention of these positions. In the later stages of the disease, operative treatment is used to correct deformities, stabilize joints and reestablish muscle balance.

Missouri State M. Assn. Journal, St. Louis

29: 51-104 (Feb.) 1932

Suprapubic Prostatectomy Under Vision with Reconstruction of Bladder Neck. C. K. Smith and J. M. Nisbett, Kansas City.—p. 51.
Orthopedics and General Practitioner. G. K. Coonse, Columbia.—p. 55.
Chemistry of Dehydration: Its Relation to Practical Treatment of Gastro-Intestinal Disturbance in Early Childhood. F. C. Neff, Kansas City.—p. 58.
Cosmetics. N. Tobias, St. Louis.—p. 63.
Problem of State Care of the Mentally Sick: Urgent Need of Efforts for Preservation of Mental Health. M. P. Overholser, Harrisonville.—p. 69.
The Manic-Depressives: Further Plea for Their Clinical Recognition. F. R. Fry, St. Louis.—p. 74.
Reduction of Edemas by Novasurol. W. M. Whitaker, Quincy, Ill.—p. 75.
Social Insurance. E. H. Ochsner, Chicago.—p. 79.

29: 105-154 (March) 1932

Modern Treatment of Cancer of Cervix Uteri. H. S. Crossen, St. Louis.—p. 105.
Technic of Breech Presentation. E. L. Dorsett, St. Louis.—p. 109.
Epithelioma. O. H. McCandless, Kansas City.—p. 111.
Carcinoma of Colon. C. J. Hunt, Kansas City.—p. 114.
*Management of Acute Otitis Media and Its Complications. J. B. Costen, St. Louis.—p. 118.
*Hyperpyrexia in Treatment of Dementia Paralytica. G. W. Robinson, Jr., and P. A. Johnson, Kansas City.—p. 121.
Acnlorhydria. E. W. Willhelmy, Kansas City.—p. 125.
Etiologic Incidence of Organic Heart Disease. L. H. Fuson, St. Joseph.—p. 128.
*Bacterium of Acute Rheumatism: Report of Fatal Case. W. M. Whitaker, Quincy, Ill.—p. 134.

Acute Otitis Media and Its Complications.—Costen states that the red drum without tympanic fluid or bulge is the one that responds to general measures. The bulging drum with tympanic fluid under pressure has the best chance of recovery without incident if incised early under careful aseptic precautions. Frequent irrigation with sterile physiologic solution of sodium chloride is a good localizing and therapeutic agent and can be handled at home, where most ear infections are treated. Simple mastoidectomy is without shock and is promptly to be advised if otitic sepsis is progressive. A residual headache or pain over the eye on the side of the ear infection, even if drainage from the ear has subsided, should be regarded with grave concern, especially in adults or people of advanced age. Frequent, small transfusions of whole blood, used early, continuously and late, are of the greatest value in any case of severe otitic sepsis.

Hyperpyrexia in Treatment of Dementia Paralytica.—Robinson and Johnson believe that no one form of treatment should be rigidly adhered to in private practice in dementia paralytica. Hyperpyrexia is the type of treatment that gives the best results in dementia paralytica and should be given early before ganglion cell death has become too widespread. Of all hyperpyrexic methods, diathermy is the most easily controlled, has fewer complications, can be used in cases in which all other forms of treatment are contraindicated, and is as efficient as any other method. A hopeless prognosis in the individual case should never be given; early heroic methods may help in cases that are seemingly hopeless.

Bacterium of Acute Rheumatism. — According to Whitaker, investigations both of human subjects and of experimental animals point to the incidence of the streptococcus as the sole organism in acute rheumatism. Different strains of streptococci are responsible. This is evidenced by the results of blood and tissue cultures isolated from rheumatic cases. A case of acute, fulminant rheumatic disease with involvement of the heart, cerebral and spinal meninges, lungs and pleurae, is presented. A diplococcal organism, analogous in cultural reactions and microscopic morphology to the Diplococcus rheumaticus of Poynton and Pain, was isolated from this case. Such observations and past and present studies tend to dispute the nonhemolytic Streptococcus cardioarthritidis as being the sole cause of rheumatic fever.

New England Journal of Medicine, Boston

206: 429-490 (March 3) 1932

Diagnosis and Treatment of Carcinoma of Colon. E. L. Young, Jr., Boston.—p. 429.
Convalescent Serum Therapy in Preparalytic Poliomyelitis. S. D. Kramer, Roslindale, Mass.; W. L. Aycock, Boston; C. I. Solomon, Brooklyn, and C. L. Thenebe, Hartford, Conn.—p. 432.
Present Status of B C G Vaccination. S. A. Petroff, Trudeau, N. Y.—p. 436.
Administrative and Economic Aspects of Rural Hospital as an Agency of Social Service. J. A. Hamilton, Hanover, N. H.—p. 442.
The Medical Practice Act. S. Rushmore, Boston.—p. 449.

206: 491-544 (March 10) 1932

*Intracistern Serum Treatment of Neurosyphilis. H. R. Viets, Boston.—p. 491.
Prostatic Pitfalls. A. H. Crosbie, Boston.—p. 500.
*Pathologic-Physiologic Studies on Changes in External Secretions of Pancreas and Liver. C. W. McClure and Mildred E. Huntsinger, Boston.—p. 507.
Progress in Proctology. E. P. Hayden, Boston.—p. 516.

Intracistern Serum Treatment of Neurosyphilis.—Viets believes that there are distinct advantages to the intracisternal serum method of treatment in neurosyphilis over other modes of therapy. The pain and sphincter weakness, often noted after intraspinal treatment, are avoided. By a careful checking of the tests in the cerebrospinal fluid each time an injection is made, the amount of treatment necessary to bring the spinal fluid to normal and the general prognosis of the case can be accurately gaged. The method may be used as an office procedure, thus keeping the patient at his normal occupation. The results obtained are better than with most other forms of treatment, especially in selected cases. Often rapid changes take place in the spinal fluid as the result of intracistern serum and as much is accomplished in a few months as is usually accomplished in a few years of intravenous treatment. The technic is not difficult to learn, but there are distinct dangers from the method in the hands of a careless operator. Treatment should be given not oftener than once in two weeks and should be continued until the spinal fluid has approached normal or is in its normal state.

Changes in External Secretions of Pancreas and Liver.—McClure and Huntsinger report that investigation of the literature shows that the great majority of observers have used analytic methods and experimental conditions for the study of the pancreatic fraction of duodenal contents which render problematic the clinical interpretation of the results obtained. However, a system of duodenal analysis has been developed which permits estimations to be made of both the pancreatic and the biliary fraction of duodenal contents, which are sufficiently accurate for reliable clinical interpretation. Using this system, the authors made a study of patients with cirrhosis of the liver, toxic jaundice, cholecystitis, cancer of the pancreas, uncomplicated duodenal ulcer and a smaller number forming a miscellaneous group, together with a series of patients who had undergone cholecystectomy. The observations warrant the following conclusions: Qualitative changes in the bile, interpreted as resulting from hepatic dysfunction, are the rule in organic diseases of the liver and gallbladder. The observations suggest that functional disturbances of the liver cells play an important part in the development of clinical jaundice. They indicate that toxic jaundice results from hepatic dysfunction rather than from occlusion of the common bile duct. In the absence of demonstrable lesions affecting the common bile or pancreatic ducts, mild pancreatic dysfunction occurred in the large majority of patients with hepatic cirrhosis, toxic jaundice and after cholecystectomy. This observation was interpreted as a result of hepatic functional disturbance, affecting interrelated pancreatic function. Hepatic dysfunction occurs in duodenal ulcer in the absence of demonstrable organic biliary lesions, as evidenced by qualitative changes in the bile. Pancreatic dysfunction may be the earliest objective evidence of malignant involvement of retroperitoneal lymph nodes. The observations confirm previous ones and show that abnormal pancreatic and biliary fractions of duodenal contents occur, respectively, when lesions obstruct the pancreatic or biliary ducts, in the presence of destructive lesions of either organ, in circulatory disturbances of them, and in the presence of functional disturbances without demonstrable organic basis.

New Orleans Medical and Surgical Journal

84: 663-740 (March) 1932

Widening Horizon of Child Health. W. W. Butterworth, New Orleans.—p. 663.
Doctor Frederick Loeber: 1839-1901. A. E. Fossier, New Orleans.—p. 667.
Word Concerning Elliot's Trephine Operation. H. D. Bruns, New Orleans.—p. 671.
Diagnostic Importance of Roentgenology in Medicine. L. J. Menville, New Orleans.—p. 674.
Headaches of Gastro-Intestinal Origin. D. C. Browne, New Orleans.—p. 680.
Cystocele and Prolapse. H. E. Miller, New Orleans.—p. 687.
Problem of Psychopathic Personality. G. F. Roeling, New Orleans.—p. 693.
Multiple Myeloma: Report of Case. W. R. Wirth, New Orleans.—p. 698.

Pennsylvania Medical Journal, Philadelphia

35: 279-346 (Feb.) 1932

Fads and Fancies in Present Day Pediatrics. J. L. Morse, Boston.—p. 279.
Pyonephrosis. G. P. Müller, Philadelphia.—p. 286.
Symposium on Bone Marrow Reactions: Granulopenia. G. M. Piersol, Philadelphia.—p. 287.
Leukemoid Blood Reactions: Differential Diagnosis of Conditions Which May Stimulate Leukemias. T. Fitz-Hugh, Jr., Philadelphia.—p. 290.
Diagnosis and Treatment of Polycythemia. S. S. Leopold, Philadelphia.—p. 293.
Mental Defective and His Needs. W. C. Sandy, Harrisburg.—p. 295.
Critical Comment on Usual Treatment of Hypertension. A. H. Colwell, Pittsburgh.—p. 298.
Asteroid Hyalitis: Report of Two Cases. H. M. Griffith, Johnstown.—p. 301.
Symposium on Relation of Dental Surgeon, Oral Surgeon and Rhinologist in Antrum Infections: Anatomy of Maxillary Sinus. R. M. Walls, Bethlehem.—p. 302.
Maxillary Sinus as Viewed by Rhinologist. S. R. Skillern, Jr., Philadelphia.—p. 306.
Oral Surgeon. L. Curtis, Philadelphia.—p. 308.
Some Diseases of Skin Offering Difficulties in Diagnosis. F. C. Knowles, Philadelphia.—p. 312.

Rhode Island Medical Journal, Providence

15: 39-56 (March) 1932

*Resuscitation. A. H. Miller, Providence.—p. 39.
Communicable Sore Eyes in the New-Born. A. B. Ingels, Providence.—p. 43.

Resuscitation.—Miller states that resuscitation is possibly effective thirty minutes after the heart has ceased to beat. It should be persisted in for another thirty minutes before one loses courage. Infants have been resuscitated and have recovered when there had been no voluntary respiratory movements for two and a half hours. As long as the circulation is maintained, there is hope. When there is need for resuscitation, time must not be wasted in moving the patient or waiting for the arrival of an inhalator. Artificial respiration by one of the manual methods should be instituted as soon as possible and continued while the inhalator is on the way. When the inhalator arrives, it should be used even if respiration has been established by manual methods. In cases treated with carbon dioxide and oxygen, pneumonia does not develop, which was the regular sequence of carbon monoxide poisoning before the introduction of the inhalator. When artificial respiration must be performed for a long period, as in the paralysis of anterior poliomyelitis or in poisoning from morphine or alcohol, the Drinker respirator is invaluable. It produces efficient artifical respiration over periods of days or weeks without strain on the operator or damage to the patient.

Surgery, Gynecology and Obstetrics, Chicago

54: 477-604 (March) 1932

*Studies of Gallbladder Function: III. Study of Alleged Impediment in Cystic Duct to Passage of Fluids. C. G. Johnston and C. E. Brown, Philadelphia.—p. 477.
Histology of Case of Ovarian Pregnancy at End of Second Month. H. E. Jordan, Charlottesville, Va.; B. C. Garrett and W. J. Norfleet, Shreveport, La.—p. 485.
*Relationship of Carcinoma of Body of Uterus and of Ovaries. S. R. Offutt, Rochester, Minn.—p. 490.
*Abdominal and Pelvic Fascias with Surgical Applications. J. W. Davies, New York.—p. 495.
*Retroperitoneal Syndrome and Relation Between Kidney and Gastro-Intestinal Reflexes. L. Tixier and C. Clavel, Lyons, France.—p. 505.
*Pathologic Studies on Injected Varicose Veins. N. H. Lufkin and H. O. McPheeters, Minneapolis.—p. 511.
Clinical Surgery: Thyroidectomy. R. V. B. Shier, Toronto, Canada.—p. 518.
Further Suggestion for Operative Treatment of Pilonidal Sinuses. F. H. Lahey, Boston.—p. 521.
Fibroblastoma (Fibroma) of Kidney: Report of Case with Review of Literature. H. L. Kretschmer, Chicago.—p. 524.
Development of Mercurochrome Technic in Obstetrics: Report of Ten Thousand Cases, Five Thousand of Which Were Studied During Experimental Stage. H. W. Mayes, Brooklyn.—p. 529.
Carcinoma of Tonsil. Review of One Hundred and Twenty-Two Histologically Proved Cases Treated from 1921 to 1928, Inclusive. J. J. Duffy, New York.—p. 539.
Thyroidectomy for Thyrotoxicosis. H. M. Richter, Chicago.—p. 551.
Acute and Chronic Infections of Parotid Gland: Treatment by Dilation of Stenson's Duct. W. H. Hobbs, H. Sneierson and C. L. Faust, Binghamton, N. Y.—p. 555.
Intussusception: Surgical Treatment in Reducible Cases. O. F. Lamson, Seattle.—p. 564.
*Epilepsy. G. W. Swift, Seattle.—p. 566.
*Marching Fractures of Metatarsal Bones: Report of Pathology. F. H. Straus, Chicago.—p. 581.
Observations in Raynaud's Disease: Histopathologic Studies. R. G. Spurling, F. Jelsma and J. B. Rogers, Louisville, Ky.—p. 584.
Anomaly of Right Recurrent Laryngeal Nerve. J. de J. Pemberton and M. G. Beaver, Rochester, Minn.—p. 594.

Alleged Impediment in Cystic Duct to Passage of Fluids.—In experiments on seven dogs, Johnston and Brown could find no impediment to the passage of fluid through the cystic duct at pressures usually found in the biliary tract. At lower pressures there is, in some animals, an impediment to the passage of fluid from the gallbladder through the cystic duct, which is overcome at pressures of from 10 to 80 mm. of water. In three well preserved human cadavers the authors found no resistance offered to the flow of fluid through the cystic duct, nor were they able to demonstrate any in five fresh necropsy specimens.

Relationship of Carcinoma of Body of Uterus and of Ovaries.—Offutt reports that, in a series of 520 cases of adenocarcinoma of the body of the uterus, there was associated carcinoma of the ovary in 11.9 per cent, and in 616 cases of papillary cystadenocarcinoma of the ovary there was associated carcinoma of the body of the uterus in 8.6 per cent. The fallopian tube should be considered as one of the means through which transplantation takes place. Because of the similarity of the adenocarcinomatous cells in the embryologically similar tissues, it is often difficult to determine which carcinoma is primary and which is secondary and whether or not there may originally have been two independent carcinomas. In cases of carcinoma of the ovaries, the possibility of metastasis to the uterine endometrium, even when there is no gross peritoneal evidence of extension of the malignant growth, must be borne in mind. Because of this possibility, hysterectomy at the time of removal of the ovaries must be seriously considered.

Abdominal and Pelvic Fascias with Surgical Applications.—According to Davies, two systems of fascia are found in the abdominal and pelvic regions, the one a thick fibrous sheet which ensheathes voluntary muscle, and the other a fibro-areolar layer which surrounds involuntary muscle and organs. Organs and structures related to the skin develop in the subcutaneous layer, while organs and structures related to the abdominal and pelvic cavities develop in the subperitoneal layer. Areas subjected to pressure by distention of the organ or structure are protected by an increased deposit of adipose tissue in the areolar layer. Vessels traversing the fibro-areolar layer are surrounded by an increase of the fibrous tissue. The mesenteroid to each muellerian duct forms the lateral support of the adult uterus and vagina. The vagina, like the rectum, is a muscular tube composed of an inner circular and an outer longitudinal layer of involuntary muscular fibers. It is covered by fibro-areolar tissue. A delicate areolar tissue connects the vagina to the bladder and to the rectum, except in the region of the hemorrhoidal mesenteroid of the vagina. The lateral ligament of the uterus is thinner and wider than the corresponding lateral ligament or mesenteroid of the vagina. The lateral mesenteroid of the vagina is a trapezoid support formed by the vaginal vessels as they traverse the fibro-areolar tissue lateral to the vagina. The anteroposterior flattening of the uterus and the vagina is due to the lateral attachments. The cylindric shape of the cervix is due to the absence of a lateral attachment and the preponderance of circular fibers. The round and uterosacral ligaments are fibromuscular bundles in which the muscular tissue predominates. Side-to-side closure of the vaginal vault following complete hysterectomy will increase the efficiency of the lateral attachments. Plastic operations increase the general pelvic tone by increasing the tone of the

lateral mesenteroid of the vagina. The passage of the middle hemorrhoidal vessels from the anterior surface of the rectum to the posterior wall of the vagina forms a distinct mesenteroid, which divides the rectovaginal area into a proximal four fifths and a lower one fifth. Postpartum cervical inspections are facilitated by traction, which is exerted laterally rather than anteriorly and posteriorly. Sulcus tears are often serious, because of a laceration of the vaginal plexus.

Retroperitoneal Syndrome and Relation Between Kidney and Gastro-Intestinal Reflexes.—From the point of view of their gastro-intestinal effects, renal reflexes are classified by Tixier and Clavel according to the organ in which they predominate, thus: 1. Renogastric reflexes. They are motor, secretory and vasomotor. Sometimes they are phenomena of stimulation, sometimes of inhibition. The pyloric sphincter is particularly sensitive to these stimuli. 2. Reno-intestinal reflexes. Some reflexes are secretory and vasomotor, others motor. Sometimes spasm is produced, sometimes paralysis. The large intestine is particularly sensitive to these reflexes; the rectum may be the site of similar phenomena, particularly in the course of violent ureteral irritation. 3. Peritonism of renal origin. These different reno-intestinal reflexes may be associated with one another or combined with cardiac, respiratory or vasomotor reflexes to cause a group of symptoms resembling those of peritonitis. The clinical picture is then made up of pain, contracture of the wall, distention, vomiting, arrest of feces and gas, and rapid pulse without fever. This, in the authors' opinion, is the pathogenesis of the retroperitoneal syndrome.

Studies on Injected Varicose Veins.—Lufkin and McPheeters state that thrombus formation in varicose veins treated by injection of even "mild" solutions depends on an injury to the endothelial lining of the vessel. Deposition thrombus usually forms the smaller portion of the total occluding mass developed after treatment. The larger mass consists of simple clot. Recurrence probably results from retraction of the clotted portion of the mass from the vessel wall between tributaries of the main channel, with reestablishment of circulation through the new channel.

Epilepsy.—Swift believes that the periodic convulsive seizures associated with so-called idiopathic epilepsy begin with a gradual accumulation of cerebrospinal fluid over the cortex and in the cisterns of the brain, causing a constant irritation to the cortex, particularly to the motor areas. The blocking of the cerebrospinal fluid may be due to inflammatory conditions of the arachnoid or pacchionian bodies, or be produced by pressure on any of the venous channels from the superior longitudinal sinus to the heart itself. A general state of hydration is essential for the convulsive seizure in all instances. Anomalous development of the venous dural sinuses is an important factor in epilepsy. Of these sinuses, the transverse sinus is of the most importance. In those cases of anomalous development it is possible, by mobilization of the transverse sinus, to restore a sufficient venous return to prevent, under normal conditions, an accumulation of cerebrospinal fluid in the subarachnoid spaces. The only complication that may arise during the course of this operation is postoperative hemorrhage. This can be avoided by careful attention to all vessels at the time of operation. Indications for this operation are the presence of anomalous venous sinuses in true epileptic patients with otherwise normal physical conditions. Contraindications for this operation are the presence of disturbances due to inflammatory conditions, resulting in obliteration of the openings into the superior longitudinal sinus (pacchionian bodies). Localized accumulations of cerebrospinal fluid over the cortex are, of course, not benefited by this operation. The results of this mobilization bring about a marked improvement in the mental condition of the patient, as well as a decrease to a large proportion of the grand mal attacks and, to a less degree, the petit mal attacks. The operation is applicable in only 20 per cent of cases.

Marching Fractures of Metatarsal Bones.—Straus calls attention to the fact that insidious fractures of metatarsal bones may occur after exhaustion of the normal muscle and tendon support to the foot. Such fractures occur without obvious trauma, and without sufficient immediate pain to notify the patient of the injury. Weeks later the developing callus becomes painful and calls attention to the lesion, but by this time the swelling is apt to be considered a neoplasm unless the observer is familiar with the picture of a marching fracture. Search of the literature shows that the problem has engaged several European authors, but no American and only one English article refers to it. The author reports a characteristic case of the lesion. The patient had been previously seen by good surgeons and roentgenologists, who had said she was suffering from a sarcoma, and she had been sent to the hospital to have an amputation of the leg. The author suggests that some cases of Deutschlander's disease may belong in this group of fractures of metatarsal bones.

Virginia Medical Monthly, Richmond

58: 773-836 (March) 1932

Moral Subnormality as an Expression of Mental Unsoundness. O. B. Darden, Richmond.—p. 773.
Practical Application of Modified Aschheim-Zondek Test for Pregnancy: Demonstration with Test Animals. W. K. Lloyd, Christiansburg.—p. 776.
Value of Hormone Test for Early Pregnancy. W. B. Martin, Norfolk.—p. 780.
Cancer of Cervix: Observations Drawn from Study of One Hundred Cases Treated with Radium. W. L. Peple, Richmond.—p. 782.
Diet in Disease. J. A. Reed, Washington, D. C.—p. 786.
Chronic Cervicitis and Its Treatment. J. W. Henson, Richmond.—p. 788.
*Total Rupture of Kidney: Report of Cases. W. C. Stirling, Washington, D. C.—p. 793.
Hunger Pain Syndrome of Functional Origin and Its Treatment. W. H. Higgins, Richmond.—p. 795.
General and Focal Signs of Intracranial Tumors. T. N. Spessard, Roanoke.—p. 797.
Problems in Relation of Streptococci and Diphtheroid Bacilli to Chronic Infectious Arthritis. A. Straus, Richmond.—p. 801.
*Association of Angina Pectoris and Anemia. W. B. Porter, Richmond.—p. 806.
Traumatic Industrial Surgery. E. T. Trice, Richmond.—p. 808.
Pellagra. J. G. Cox, Hillsville.—p. 811.
Why Always Appendectomy? M. B. Hiden, Warrenton.—p. 812.
Removal of Tonsil by Electrocoagulation. J. B. H. Waring, Cincinnati.—p. 813.
Snake-Bite Poison. O. Marshall, Washington, D. C.—p. 816.

Total Rupture of Kidney.—According to Stirling, traumatic injuries of the kidney are relatively infrequent as compared with injuries in other parts of the body. The relative proportion is approximately 1 to 1,000. A prompt and thorough examination, including cystoscopy, should be done in all cases in which injury to the kidney is suspected, in order to lower the mortality and reduce complications to a minimum. Hematuria is the sign seen oftenest, though one or more of the classic signs may be absent. The amount of trauma may bear no relationship to the extent of the injury, as complete rupture of the kidney has been known to follow simple injuries. Complications include injury to the peritoneum, with rupture of the liver, spleen and, in many instances, fracture of one or more ribs. In cases in which one or both poles of the kidney are torn off, nephrectomy should be done to prevent exsanguination. General supportive treatment, including blood transfusion, is of much help in combating the shock. Early exploration, with conservative surgery, offers the patient the best chance of recovery. This includes suture of the torn kidney and packing, if needed, for hemorrhage, together with drainage. The mortality when this has been done is low.

Association of Angina Pectoris and Anemia.—Porter studied two cases of megaloblastic anemia and angina pectoris. In each instance, relief was obtained by restoring the normal qualitative state of the blood by liver feeding. In the study of angina pectoris the possibility of an associated anemia as a possible precipitating factor must be considered, or a valuable therapeutic approach to the situation may be omitted. The author's study adds additional evidence to the "myocardial ischemia" conception of the pathogenesis of angina pectoris as opposed to the aortic theory.

West Virginia Medical Journal, Charleston

28: 97-144 (March) 1932

Certain Aspects of Immunity, Especially as Applied to Tuberculosis: Oration on Medicine. G. H. Barksdale, Charleston.—p. 97.
Studies of White House Conference on Child Health and Protection. S. M. Hamill, Philadelphia.—p. 102.
Practical Methods in Handling of Diabetes. W. M. Sheppe, Wheeling.—p. 113.
Retina in Hypertension: Hypothetical View as to Its Cause. K. G. Khorozian, Pineville.—p. 117.
Romance of Paternalism. W. F. Donaldson, Pittsburgh.—p. 121.
Should Uncle Sam Render Medical Care to Veterans, and How? W. E. Whiteside, Parsons.—p. 124.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 363-410 (Feb. 27) 1932

*Clinical Study of Achlorhydria. H. Moore.—p. 363.
*Some Clinical Aspects of Coronary Disease. T. F. Cotton.—p. 368.
Diagnosis of Neurotic Conditions in General Practice. D. Forsyth. —p. 370.
*Use of Vitamin B in Cases of Edema. D. W. Carmalt-Jones.—p. 374.
Shortening an Elongated Uvula for Cure of Cough. J. Dundas-Grant. —p. 375.
Diverticulum of Male Urethra, with Suggestion as to Its Origin. C. H. Carlton.—p. 376.
Human and Bovine Tuberculosis. N. Raw.—p. 377.

Clinical Study of Achlorhydria.—For more than ten years Moore has been interested clinically in achlorhydria, and about five years ago his interest in this connection became acute when some peculiar cases of anemia in middle-aged women presented themselves. The anemia in these patients appeared at first sight to be pernicious in type, since there was atrophy of the lingual papillae associated with superficial glossitis and achlorhydria, and the patients had a sallow or subicteroid complexion. The blood examination, however, showed an anemia with a color index well below unity; megalocytosis was absent, and, although there was anisocytosis and poikilocytosis, the average size of the erythrocytes was not greater than normal; the anemia, therefore, was not addisonian in type. As the standard textbooks did not give any information about this syndrome, and as a superficial search of the journals furnished but little, it was evident that it was a form of anemia not generally recognized. During the following years the author endeavored to collect, and when possible to study, cases of this form of anemia —that is, cases of nonmegalocytic anemia presenting a low color index and achlorhydria; he succeeded in collecting thirty-three such cases, in each of which the hemoglobin content of the blood was under 70 per cent. During the same period he did fractional test-meal analyses on as many other patients as was possible, with the idea of obtaining some information relative to the incidence of achlorhydria in other diseases. Out of forty-seven cases of so-called secondary, hypochromic, or nonmegalocytic anemia, thirty-three, or 70 per cent, presented achlorhydria. Therefore this particular form of anemia is probably one of the commonest types of anemia encountered; it is certainly surprising that so little attention has been paid to it in the literature and that it has been so seldom recognized in practice. Out of eighty-three patients with diabetes mellitus, thirty-three, or over 39 per cent, had achlorhydria, and out of forty-seven patients with hyperthyroidism, thirty-seven, or over 78 per cent, had achlorhydria. There were 100 gastro-intestinal cases and 74 miscellaneous cases showing achlorhydria. Out of a total of 1,228 patients tested by the fractional test-meal method during three and a half years, 272, or 22 per cent, had achlorhydria, as judged by this technic. On the basis of his observations the author concludes that achlorhydria, besides being found in a certain proportion of apparently healthy persons, in many cases of gastro-intestinal disease, and in odd cases of miscellaneous disorders, is a frequent observation in diabetes mellitus and a still more frequent occurrence in hyperthyroidism and in the nonmegalocytic "hypochromic" anemia described. In the latter disease it seems to have caused relationship, direct or indirect, but in the light of recent work on pernicious anemia even this surmised causal relationship may ultimately prove to be incorrect. At any rate, this form of anemia is of frequent occurrence, and its adequate treatment with iron in the ferrous form, by mouth, gives satisfactory results.

Clinical Aspects of Coronary Disease.—Cotton emphasizes the fact that the indications for treatment of coronary thrombosis and angina pectoris are essentially different. Coronary thrombosis is an acute illness, sudden in its onset, and there may be rapidly developing symptoms of a grave heart condition. Morphine should be given in doses large enough to relieve the pain, which is an early and conspicuous feature of the occlusion syndrome. Rest in bed for at least a month is essential, preferably for six weeks; and every unnecessary movement should be avoided for two weeks, or longer if there are symptoms of shock, signs of embolism, or congestive failure. Good nursing and mild sedatives are more important than circulatory stimulants: mild purgatives and enemas are usually required if morphine is continued for any length of time. Digitalis is indicated when there are signs of congestive failure and the auricles are fibrillating or in a flutter; epinephrine should be reserved for patients with signs of heart block, and quinidine restricted to rare cases of paroxysmal tachycardia of unusual length. A convalescence of two months is always necessary before allowing the patient gradually to resume a part time or full time active life. Angina pectoris, on the other hand, is a chronic malady, and the treatment is ambulatory in most cases. When the attacks recur at frequent intervals or reach a stage of status anginosus, and the pain is not easily controlled by nitrites, a long rest in bed is indicated. Such patients are sometimes helped by chloral hydrate, or morphine given in sufficient doses to raise their pain threshold and keep them free from pain for a week or two. The therapeutic measures on which one must rely are based on restricting their activities, both physical and mental, and regulating their lives so that the extracardiac contributory factors aggravating the anginal syndrome may be eliminated or controlled; a suitable diet, a change of environment, and the treatment of focal sepsis form part of this regimen. It is doubtful whether drugs which are supposed to have a dilating action on the coronary vessels materially alter the course of the disease. For patients with cardio-aortic syphilis, iodides and mercury should always be prescribed; intravenous injections of arsenic are indicated in the early stages of the disease and can be given under conditions of rest in moderately large doses.

Use of Vitamin B in Cases of Edema.—Carmalt-Jones states that in 1918 Wenckebach described "the beriberi heart." In beriberi, right heart failure often occurs, in which there is grave edema, resisting cardiac drugs but disappearing at once on the administration of vitamin B. Profound edema is always of serious significance in heart failure with congestion in cases of rheumatic origin. Every hospital physician is familiar with rheumatic heart cases which are constantly in and out of the hospital, the intervals between the attacks progressively diminishing until the patients are admitted with extensive edema; this admission is generally the last. There are occasional exceptions, but extensive edema is often of the gravest prognosis in congestive heart failure. In the light of Wenckebach's paper, the author thought it would be wise to try the effect of vitamin B in such cases, to see if by this means any principle, the absence of which was causing the fatal result, could be supplied. He used it first in two or three moribund cases, in which its effect, if any, was quite insufficient to postpone death. A few less grave cardiac cases showed some improvement and afforded encouragement to proceed, but death was not prevented. In the edema of pernicious anemia, however, two striking results were obtained, and in some edemas of other origin the results were satisfactory.

Indian Medical Gazette, Calcutta

67: 61-120 (Feb.) 1932

Result of Forecast of Cholera, Smallpox and Plague in India in 1931 and Forecast for 1932. L. Rogers.—p. 61.
*Mutation of Cholera Vibrios: Characters of Population of Freshly Isolated Cholera Colony, with Note on Some Colony Variants of Cholera and Cholera-Like Vibrios. C. L. Pasricha, A. J. de Monte and S. K. Gupta.—p. 64.
*Percain in Spinal Anesthesia. B. B. Dikshit and D. H. Rao—p. 69.
Epidemic of Jaundice in Alipuram Jail, Bellary (South India). C. G. Pandit and R. S. Rao.—p. 77.

Mutation of Cholera Vibrios.—Pasricha and his associates report that by subjecting to repeated cultivation on ordinary bile salt medium a freshly isolated cholera strain which is resistant to one or more types of choleraphage, and by selection of those colonies which behave differently from the parent colony, one can obtain colonies which differ in their morphologic, cultural and serologic characters. In an experiment which they performed, inagglutinable colonies and partially agglutinable colonies were derived from a good agglutinating colony. Some of the dissociated colonies lost not only the property of agglutinability with cholera serum but also the agglutinogenic power of the cholera vibrio. The serum prepared with the original strain possessed no appreciable amount of agglutinins for the serologic variants derived from the original strain. There is no definite order or stability of the serologic variants obtained. The evidence in the literature for the transformation of an

agglutinating vibrio to a nonagglutinating vibrio is so slender and contradictory that no definite conclusions can be arrived at, and one cannot as yet establish a definite relationship between the vibrio of the disease and the vibrio found in nature.

Nupercaine in Spinal Anesthesia.—According to Dikshit and Rao, nupercaine is a drug of fairly high toxicity and its toxicity is increased in toxemic conditions. It has a powerful action on the cardiovascular system and produces a slowing and irregularity of the heart in small doses. Blood pressure is lowered and the splanchnic vessels are dilated. It markedly depresses the respiratory center and this action is manifested when the drug is injected intravenously or applied locally by injecting it into the cisterna magna. On the central nervous system it acts as a convulsant. Its action on the sensory nerves is marked, analgesia being produced in low concentrations. Clinically it has been found to be a drug of high potency and toxicity, and great care is necessary in its administration. Proper technic makes for success. Blood pressure is better controlled by giving ephedrine ten minutes after the spinal injection. Respiratory embarrassment is more to be dreaded than circulatory disturbances but is much less in frequency. Headache is the only important undesirable sequela and is amenable to treatment. The duration of analgesia and the degree of muscular relaxation are the distinctive features of the drug when given by the spinal method.

Lancet, London

1: 435-494 (Feb. 27) 1932

*Some Factors in Causation of Hydronephrosis. J. P. Hosford.—p. 435.
*Treatment of Rheumatoid Arthritis with Gold Salts Injections. J. Forestier.—p. 441.
*Detection of Presymptomatic Tuberculosis in Children. E. Fletcher. —p. 444.
Changes in Liver of Mice Following Ingestion of Hydrocarbon Oils. J. M. Twort and C. C. Twort.—p. 448.

Factors in Causation of Hydronephrosis. — Hosford divides the causes of hydronephrosis into congenital and acquired. The term congenital hydronephrosis at once raises a difficulty in nomenclature, because there is a type commonly called congenital in which the dilatation affects mainly the pelvis of the kidney. In that the dilatation is probably not present at birth it is not really congenital, although the factors which cause it may be congenital. It is best to confine the term congenital to those types of hydronephrosis which are present in the new-born or are discovered after birth. It is found that they fall into two main groups: (1) those in which there is some discoverable mechanical cause obstructing either the ureter or urethra, and (2) cases of megalo-ureter combined with hydronephrosis in which there is no discoverable obstruction. In the first group the ureter may show a definite stricture, narrowing or fold, or it may present as an impervious cord. In quite a number of those cases showing distention of the bladder, as well as distention of the ureters and kidneys, some congenital mechanical obstruction can be found in the posterior urethra. The commonest is a valve, so arranged that it obstructs the downward passage of urine but does not prevent the upward passage of a bougie. In the second group, in which no obstruction can be found, the ureteral orifices and bladder sometimes share in the dilatation, though in others the kidney and ureter of one side are alone affected. The cause of the dilatation is unknown, but it has been suggested by some authorities that the explanation may be an embryologic one. It has been shown that the ureters in fetal life up to the third or fourth month are of large caliber, as compared with the size of the kidney and the rest of the body. Deficient development of the musculature of the ureter may be the cause. This musculature does not begin to develop until the third month—it begins at the lower end of the ureter and gradually spreads up to the renal pelvis. An imperfect development, a true hypoplasia of the muscle fibers, must be seriously considered as a possible cause. This possibility, in addition to the persistence of the wide caliber of the ureters as seen in early fetal life, may explain the condition of congenital megalo-ureters and dilatation of the renal pelvis. The author divides the causes of acquired hydronephrosis into two groups also: (1) cases in which there is a demonstrable macroscopic obstruction, and (2) cases in which there is no such obstruction. In the first group the obstruction may be due to a variety of lesions, among which may be mentioned calculus, neoplasms or tuberculous inflammation obstructing the ureter, ureteral strictures, and ureteral kinks. In connection with the last of these the author refers to aberrant vessels and abnormal mobility of the kidney. He does not deal with the question of urethral or bladder obstructions in the cause of hydronephrosis. The group of cases in which there is no demonstrable macroscopic obstruction is of much greater interest, and he refers to it at some length.

Gold Salts in Rheumatoid Arthritis.—According to Forestier, the action of the gold salt treatment in rheumatoid arthritis does not appear very quickly to clinical examination; at least two or three months elapse before definite changes in the condition of the patient are observed. The effect on the general condition is generally remarkable; a high percentage of rheumatic patients are pale, with a shallow café au lait color. After three months' treatment their color becomes normal and they look much stronger and less depressed. The action on the joints is different in cases of short and long standing; in the first, when there was only a synovial swelling, this disappeared progressively in two or three months in favorable cases and the joints became completely normal again. In the older cases, in which subluxations and stiffness accompanied chronic inflammation of the joints, the latter changes disappeared but the former were only slightly modified. The main cause of invalidism among rheumatic patients is the pain on active and passive movements; in the author's experience this diminished progressively after one month or more, and from that time the movements of the different joints were greatly improved. Three patients who had been bedridden for from four to six years were able to stand up and walk a few steps after the first series of treatments. The body weight showed in some cases an increase of a few pounds, but other patients lost a little weight when they were able to take a larger amount of physical exertion. Like the treatment with mercury, bismuth and arsenic, the gold salts also may cause reactions against which one should be on guard. Sometimes an increase of temperature and temporary rashes may occur; these appear in certain sensitive patients for no reason and could be considered as anaphylactic phenomena; they did not prevent the author from continuing the treatment. Sometimes, after from six to eight injections, toxic changes occurred. They consisted of two kinds: those on the mouth and those on the skin. In 20 per cent of the cases there was observed a mild form of stomatitis with erosion of the lips and tongue, which was severe in only four cases. The skin reactions were mostly morbilliform rashes, and in five instances erythrodermia with subsequent desquamation. One should always ask the patient when an injection is to be made whether the preceding one has caused any irritation in the mouth or on the skin; if there is the least doubt about it, the next injection should not be given, and a sufficient length of time should elapse before the treatment is resumed. To prevent any disorder of the mouth, the patients should clean their teeth with a tooth paste containing arsenic.

Presymptomatic Tuberculosis in Children.—Fletcher made a survey of fifty children, mostly of school age, who, at the time they were sent for, were considered healthy by their parents. Among the fifty were found four cases of "latent tuberculosis" (tuberculosis of childhood), four of enlarged lymph nodes of the tracheobronchial group, and five of non-tuberculous fibrosis, making a total of thirteen cases in all. The tuberculin test gave the following results: Of four cases of tuberculosis of childhood one was plus plus, two were plus, and one was negative; of four cases of enlarged lymph nodes, two were plus, one was negative, and one was not done. It is concluded, so far as it can be from such a small number, that the tuberculin test is not a guide in a sufficiently important group of cases. As no case of tuberculosis of childhood developed, so far as is known, from contact with an open case of tuberculosis, it seems that there is still a large amount of accidental tuberculosis abroad—what the French call "tuberculose de la rue." In an American series, 91 per cent of children with roentgen lesions had no history of exposure. The probable period of development and resolution in favorable cases of "latent" tuberculosis in children is about three months. The shape and extent of the lesion by roentgenography is apparently not a guide to its severity or an indication of its prognosis. Clinical examination and the tuberculin test are not altogether reliable guides to the presence of "latent" tuberculosis.

Bull. et Mém. de la Soc. Méd. des Hôpitaux de Paris

48: 157-204 (Feb. 15) 1932

Blood Phosphorus in Pathology. M. Labbé and M. Fabrykant.—p. 157.
Fatal Icterigenic Spirochetosis in Patient with Latent Cancer of Stomach. M. Bariéty and M. Albeaux-Fernet.—p. 166.
Azotemic Syndrome: Sodium Chloride Therapy. C. Laubry and P.-L. Thiroloix.—p. 173.
*Treatment of Tabetic Gastric Disturbances by Intravenous Injections of Atropine Sulphate. T. Alajouanine and A. Horowitz.—p. 178.
Alimentary Hypoglycemia. M. Labbé, R. Boulin and M. Petresco.—p. 181.
*Tuberculosis with Multiple Synovial and Serous Manifestations. F. Bezançon, L. de Gennes, E. Bernard and Oumansky.—p. 186.
Leukemia Subsequent to Benzine Intoxication. P. Emile-Weil.—p. 193.
Primary Pelvic Pneumococcus Peritonitis in Adult. Ledoux, Humbert and Gomet.—p. 198.

Treatment of Tabetic Gastric Disturbances by Intravenous Injections of Atropine Sulphate.—Alajouanine and Horowitz call attention to the almost constant favorable results they obtained in thirty cases of tabetic gastric disturbances treated by intravenous injection of atropine sulphate. The treatment consists of the injection intravenously of from 1 to 3 mg. of atropine sulphate, once or twice daily, for several days. The group studied included patients with sensory and sensory-motor gastric disturbances, sometimes with the sympathetic system, sometimes with the vagus nerve predominating; the attacks were brief, from three to four days, or prolonged from two to three weeks. In some patients, the fulgurating pains that accompanied the gastric disturbances also disappeared or were calmed after treatment. The authors did not find any contraindications to the treatment. In most patients the improved condition lasted from one to three years. Recurrences were again treated.

Tuberculosis with Multiple Synovial and Serous Manifestations.—Bezançon and his co-workers report a case which was diagnosed as bilateral tuberculous hydrarthrosis of the knees. They state that tuberculous hydrarthrosis of the joints is not as exceptional as a simultaneous infection of all the chief arthrosynovia. The serous manifestations were characterized by a double pleurisy complicated by pericarditis without the sign of any pulmonary lesion. The process next appeared in the synovial membranes of the knees, elbows, wrists and ankles, passing through a state of hydrarthrosis but leaving the subjacent bone, the articular surfaces and the ligaments clinically and roentgenologically intact. On the other hand, all the serous tissue, juxta-articular bursae and muscular synovial membranes of the tendons in and about the joints were infected, whether suppuration was present or not. As a whole, the lesions were cold and exudative from the beginning, but there were no active inflammatory reactions and the lesions were different from those described in the course of tuberculous rheumatism. Twice a focal inflammatory reaction appeared at the level of the hydrarthrosis of the knees after subcutaneous or intradermal injection of a small quantity of tuberculin. The authors state that it is exceptional to find multiple tuberculous localizations in an adult (40 years old) with predilection for the serous tissue, invading successively the pleura, the pericardium and all the main articular or juxta-articular synovial membranes and leaving intact the parenchyma and the subjacent bone.

Journal de Médecine de Lyon

13: 99-136 (Feb. 20) 1932

*Treatment of Pneumococcus Peritonitis. Nové-Josserand.—p. 99.
Deficient Diets and Inapparent Dystrophies in Child. G. Mouriquand.—p. 103.
Pulmonary "Scissuritis" in Children. M. Péhu and J. Boucomont.—p. 111.
*Spontaneous Nontuberculous Pneumothorax in Nurslings. C. Gardère and J. Savoye.—p. 117.
*Typhobacillosis of Landouzy and Its Pathogenesis. A. Dufourt and P. Etienne-Martin.—p. 123.

Treatment of Pneumococcus Peritonitis.—Nové-Josserand states that, generally speaking, pneumococcus peritonitis is a pneumococcemia and a diffuse infection that can be localized in the lungs, heart, kidneys and other organs without showing these lesions clinically in the first period of the disease. No symptom is pathognomonic. The diagnosis should be established after a consideration of the symptoms peculiar to pneumococcus peritonitis and their evolution. The early age, female sex, absence of a prodrome, preexistence of a pleuropulmonary infection or, better, an angina, a rhinopharyngitis, an otitis or a vulvovaginitis, with progression to influenza, can lead to a presumptive diagnosis of pneumococcus peritonitis. Other symptoms are a sudden, violent onset with rapid elevation of temperature to 40 C. (104 F.) or higher, followed at the end of several hours by an almost complete lull in the pains and vomiting and a fall of the temperature to 38 or 38.5 C. (100.4 or 101.3 F.). Such sedations in appendicitis are not as marked. Examination of the abdomen reveals a slight distention without contraction of the wall and without distinct pain on pressure. The patient seems to suffer more from colic than from a peritoneal reaction. The right iliac fossa is supple and only slightly painful; one can palpate it deeply without feeling resistance. There are some forms that deviate from this semeiology and then early diagnosis is impossible. In regard to whether a surgical intervention is as urgent in pneumococcus peritonitis as in other forms of acute peritonitis, the author states that the intervention during the first hours is not without danger and is useless, since the diffuse and slight extravasation cannot be cleared up and the source of the infection cannot be removed because it is diffuse and often septicemic. But, in practice, the difficulty in differential diagnosis from appendicitis does not contraindicate a surgical intervention. Diagnosis is often possible, and when it is sufficiently certain, a delay, while the patient is being observed closely, is necessary, since, in diffuse forms, operative indications can be noted after the second day. If the diagnosis remains doubtful, it is best to intervene, but one should proceed in such a manner as to render as little harm as possible.

Spontaneous Nontuberculous Pneumothorax in Nurslings.—Gardère and Savoye state that spontaneous nontuberculous pneumothorax is not very rare in early infancy and it is more frequent than tuberculous pneumothorax. It appears especially in the course of pneumonia, bronchopneumonia or pulmonary abscess, often secondary to one or another of the infections. The symptomatology varies with the intensity of the functional signs, the causal disease and the evolution. It may take the form in which the distinct clinical characters may be recognized at the bedside, or the pneumothorax may be more or less latent and can be recognized only in the roentgenograms. The transformation into pneumothorax in the course of bronchopneumonia with pulmonary abscess is frequent and often fatal. The prognosis depends on the causal infection. In the course of a pulmonary infection with medium intensity and favorable prognosis, the pneumothorax itself cannot be considered a serious aggravation and, in spite of early age, is well tolerated and improves rapidly. The presence of an extravasation, in the case of hydropneumothorax, is not an aggravating circumstance unless the liquid becomes purulent. Treatment consists of inhaling large doses of oxygen, and tonicardiac and sedative medicaments to attenuate the intensity of the dyspnea. In suffocating forms, which usually awaken latent lesions of the opposite lung, pleural puncture is indicated in order to diminish the tension of the gaseous extravasation. After the patient's condition has improved, it is sufficient to treat the causal disease. A pneumothorax in the pure state will undergo spontaneous resorption.

Typhobacillosis of Landouzy and Its Pathogenesis.—Dufourt and Etienne-Martin state that the clinical syndrome of typhobacillosis, as described by Landouzy, consists of a pretuberculous bacillary fever in which the temperature curve resembles that of typhoid. They describe thirteen personal observations of typhobacillosis in children. These cases prove that the disease appears suddenly in children in whom the temperature formerly was normal. Sometimes, other signs than a febricula may exist. The temperature may suddenly rise to 39 C. (102.2 F.) or above. Even though roentgen examination shows lesions in two thirds of the patients, the relationship between them and the fever is not explained, since analogous lesions are found in children that are in the period of primary tuberculous infection. The authors state that the tuberculosis is an early secondary complication of typhobacillosis and their coexistence should not preclude identity. This contemporaneous but not necessary manifestation of the primary infection proves the presence of a general infection. The fever is an autonomic entity and is not necessarily accompanied by anatomic lesions; it may depend on a blood infection brought about by a tuberculosis virus.

Revue Sud-Am. de Méd. et de Chir., Paris

3: 1-96 (Jan.) 1932

Progressive and Total Suppression of Pancreas Does Not Produce Diabetes in the Dog. P. Escudero.—p. 1.
*Roentgenographic Image in Auricular Fibrillation. P. Cossio.—p. 19.
Clinical Aspect of Meteorology. A. Dias.—p. 29.
*Hemiplegia in Cerebral Hydatid Cyst in Child. L. Morquio.—p. 39.

Roentgenographic Image in Auricular Fibrillation.—Cossio states that since auricular fibrillation involves arrhythmia it ought to be recognized by electrocardiography and phlebography, which offer the means of analyzing, outside of the cadence of the activity of the heart, the succession of the phenomena that are produced during a revolution of the central organ of circulation. He had had occasion to study fifteen observations (one with an examination at necropsy) in which invariably a peculiar roentgen image coexisted with the auricular fibrillation. This image was characterized by the presence of a mitral configuration in its left contour and a double arc in its right contour. The author concludes that when one is in the presence of a cardiac image in which the left contour presents the characteristic of a mitral configuration and the right contour presents a double arc, the former due to the left auricle, one should consider a mitral disturbance in its final stages; namely, auricular fibrillation. However, even though the auricular fibrillation may be the consequence of a mitral disturbance, it does not always present a projection of the left auricle in the right contour.

Hemiplegia in Cerebral Hydatid Cyst in Infant.—Morquio states that his observations in five cases of cerebral hydatid cysts showed that the predominating phenomenon is a hemiplegic syndrome. It was the hemiplegia which guided his diagnosis. He finds that when the patient appears for the examination, the hemiplegia is generally complete, including the arm and the leg, in several instances also the lower part of the face. Dextrohemiplegia may consist of aphasia or temporary alteration in speech. The hemiplegia is spastic; there is a hypertonicity, exaggeration of the reflexes, clonus of the feet, epileptoid trepidation, and Babinski sign—all characters of secondary degeneration of the pyramidal tract. The opposite side is apparently free; sometimes, it is entirely normal, while at other times there is an exaggeration of the reflexes. The author did not consider complicated cases in which the stiffness affected the two sides equally. In several instances the leg, in other instances the arm, predominated. There was no disturbance in sensation. The hemiplegia is insidious, in one or two stages. Pure hemiplegia does not always exist. In hemiplegia of a cerebral hydatid cyst, one can find at the onset or after a while that the paralysis is more extensive than the hemiplegia; the patients have difficulty and almost absolute impossibility in standing and walking, so that functionally it is a complicated hemiplegia. The complication consists in more than just a paralytic accentuation, frequently, in a loss of equilibrium or motor coordination; but the ordinary movements can be made when lying down, indicating that the forces are conserved. The author believes that a diagnosis of cerebral hydatid cyst is possible in most cases. This diagnosis, in the majority of cases, can facilitate a surgical intervention at an opportune time. Four of his patients were operated on; two of these died and two were cured. An early diagnosis and an improved surgical technic will make possible more favorable results. For the formulation of a diagnosis of cerebral hydatid cyst, one should take into consideration the clinical characteristics, the previous signs and especially the origin of the symptoms.

Chirurgia degli Organi di Movimento, Bologna

16: 499-612 (Dec.) 1931

Os Trigonum and Fractures of Posterior Process of Astragalus. G. Ghigi and A. Morelli.—p. 499.
Gibbus Resulting from Tetanus. S. Ciaccia.—p. 531.
Treatment of Central Luxation of Femur. R. Babini.—p. 546.
*Subcalcaneal Exostoses. G. Mazzacuva.—p. 557.
Treatment of Hallux Valgus. T. Biancheri.—p. 583.
Bone Cyst Treated with Osteoperiosteal Transplant (Delagenière Operation): Case. G. Moreira.—p. 591.
Tuberculosis Involving Shaft of Bone. F. Rebaudi.—p. 599.

Subcalcaneal Exostoses.—Mazzacuva found the proportion of acquired subcalcaneal exostoses much less than is commonly reported in the literature. It ranges, according to his experience, between 3 and 4 per cent. Of the many theories advanced for the etiopathogenic interpretation of calcaneal exostoses, the author thinks that none exactly fit all cases. Exostosis is a manifestation that has no etiopathogenic specificity, for which reason it is necessary to seek in each patient the local and general causes that may have brought about its appearance and growth. In none of the author's cases was he able to find a frank roentgen, clinical or anatomopathologic difference between the spurs that gave evidence of an associated infection and those presented by subjects without any previous infection that was demonstrable objectively or by the case history. The presence of mucous bursae in the tissues adjacent to the spur is an exceedingly infrequent observation and is interpreted as a protective reaction of the tissues secondary to the chronic traumatic stimulus caused by the exostoses. Bloodless treatment may produce excellent results, especially in cases of infective origin or in exostoses that, while of different origin, are single, of small volume, and when the financial circumstances of the patient are such as to allow him comparative rest for the limb for a period of several months. The treatment consists primarily in the adoption of specific therapy and, secondarily, in the application of an ordinary plantar orthopedic apparatus if the patient has flat feet. The immediate and remote results of open surgical treatment (which is always carried out in case of multiple exostoses that have shown no benefit from conservative treatment) are, in the author's experience, always excellent and such as allow the patient to resume completely and permanently his former occupation.

Gazzetta Internazionale di Med. e Chir., Naples

40: 1-36 (Jan. 15) 1932

Dermatosis Due to Occupational Arsenic Poisoning. F. Leoncini.—p. 1.
Experimental Research on Chronic Carbon Disulphide Poisoning. A. Antonini and G. Tamburi.—p. 2.
Effects of Ergotamine Tartrate on Carbohydrate Exchange. F. Amelio.—p. 6.
*Anisotonic Solutions in Treatment of Disequilibrium of Endocranial Pressure. G. Pozzi.—p. 13.

Anisotonic Solutions in Treatment of Disequilibrium of Endocranial Pressure.—Pozzi calls attention to the possibilities of anisotonic treatment in disorders of endocranial pressure, a form of treatment widely used in foreign countries but little known as yet, or at least little used, in Italy. The author discusses first the biologic principles on which this treatment is probably based and then reviews the various morbid conditions in which it is indicated. Then he considers the value of the treatment in acute disorders of endocranial pressure following craniocerebral traumatism (diffused cerebral compression and posttraumatic cerebral hypotension) and in disorders of neoplastic origin, in which it appears to be of advantage as a means of adapting patients to an operative intervention; as a mode of treatment of phenomena of acute hypotension that may be observed in the course of the intervention itself, and, finally, as a mode of treatment for postoperative cerebral hypotension due to protracted loss of cerebrospinal fluid from the wound. In view of its harmlessness, he considers this method of treatment deserving of confidence and of wide use in current practice.

Semana Médica, Buenos Aires

39: 337-420 (Feb. 4) 1932. Partial Index

Phrenicectomy in Pulmonary Tuberculosis. F. Etcheverry Boneo.—p. 337.
*Gastrotonometry in Treatment of Gastric Leiasthenia. T. Martini and R. E. Curutchet.—p. 353.
*Colon Bacillus in Lithiasis of Gallbladder: Etiopathogenesis. H. J. D'Amato and A. Toroz.—p. 358.
Rupture of Echinococcal Cysts of Liver into Pleural Cavity. P. Jáuregui and V. Subiza.—p. 363.
Treatment of Chronic Third Grade Puerperal Inversion of Uterus by Taxis. J. Leon and D. D. Caravias.—p. 368.
Treatment of Hyperchloremia by Intravenous Injections of Hypertonic Solutions of Sodium Chloride. A. Pierini.—p. 378.
Semeiology of Azotemia. R. A. Izzo.—p. 387.

Gastrotonometry in Treatment of Gastric Leiasthenia.—Martini and Curutchet's work is a continuation of previously reported work on gastrotonometry (intragastric pneumatic massage following intragastric insufflations of air) in the treatment of leiasthenia (asthenia of the muscles of the stomach with disturbances of the gastric motility, developing into dys-

pepsia). The technic and immediate clinical and roentgen results of the treatment were described in illustrations in *La Semana Médica* (**37**:1954 [Dec. 25] 1930). The treatment consists of one or two series each of ten intragastric insufflations of air. The insufflations are given at intervals of from three days to one week. The amount of air insufflated varies, according to the capacity of the patient's stomach, from 900 to 1,275 cc. The limit of distensibility of the stomach is determined by the appearance of a slightly painful tenderness in the patient's stomach during the insufflation. Rarely a second series of insufflations is necessary and, when it is, the insufflations should be given after a period of rest, which varies from one to two months, during which time the patient should be out of the hospital. Therapeutic intragastric insufflation has a mechanical action on the gastric muscles, by the successive distention and retraction of the organ, thus producing the effect of an intragastric pneumatic massage on the walls of the stomach. It has also a chemical action on the organ, by means of the insufflated gases. By this combined mechanical and chemical action, the stomach regains its muscular energy, contractility and tonus, and hence its functional normality. The authors obtained good results from the treatment in about 100 patients with functional motor gastric disturbances and dyspepsia of the second or third grade. They now report late clinical and roentgen results of the treatment in a patient belonging to this group, who had anorexia and progressive dyspepsia for seven years. When the patient began to receive the treatment, her condition was poor: she had lost about 20 Kg. (44 pounds). The treatment gave satisfactory results, which still persist three years after the treatment was given. From their experiences, the authors conclude that therapeutic gastrotonometry is a harmless method of a simple technic and of great value in the diagnosis and therapy of disturbances of the stomach, especially those originating in faulty motor functions. The only contraindication to the application of the method is the presence of ulcers or neoplasms of the stomach. Therapeutic gastrotonometry is the most rational treatment of gastric atony, either simple or complicated by dolichogastry. The treatment may produce satisfactory results in cases in which other treatments, previously given, have failed. Patients are not subjected to the use of uncomfortable abdominal supports. As they recover they regain their normal weight without surpassing it. The increase of the gastric tonus under the influence of the treatment causes the disappearance of anorexia in 70 per cent of the cases. The method permits one to make gastrotonometric measurements of the gastric tension, the figures of which are so exact that even latent dolichogastry may be detected when the roentgen examination does not show as yet the presence of a diminished tonus of the gastric muscles. Therapeutic gastrotonometry is also of value in patients with splanchnoptosis and anorexia in whom fat therapy is indicated.

Rôle of Colon Bacillus in Biliary Lithogenesis.—D'Amato and Toroz made observations in forty-two patients with biliary calculi and in eighty-nine patients with other diseases than biliary calculi (either with or without lesions of the gallbladder). They conclude that the colon bacillus is a frequent cause of infection and the most frequent cause of biliary lithogenesis. The clinical picture of biliary lithiasis when caused by the colon bacillus is characterized by a prolonged and attenuated evolution of the disease. The patients have a subfebrile temperature with changes of an intermittent type and long remissions in the appearance of the symptoms. They give a history of intestinal disturbances with either constipation or diarrhea. As a rule, the bowels move every three or four days. The colon bacillus appears and disappears intermittently in and from the urine (and sometimes simultaneously in the blood and in the bile). Hence the advisability of a repeated bacteriologic examination of the urine (the most common route of elimination of the bacillus) if there are any symptoms of infection or intestinal disturbances. If one fails to identify the colon bacillus by the repeated bacteriologic examination of the urine in patients with biliary calculi, the etiology of the disease should be considered as of a noninfectious nature. Sixty per cent of the cases of biliary calculi are of infectious origin (40 per cent of which are caused by the colon bacillus). The colon bacillus may be identified simultaneously in the urine and in the bile or alone in the urine, but never alone in the bile. Colibacillemia may exist in patients with other diseases than biliary calculi. In some of these cases, catarrhal lesions in the gallbladder (the so-called lithogenic catarrh), which precede the formation of biliary calculi, are observed, while in other cases the liver and gallbladder remain normal. Renal calculi are a frequent complication in patients with biliary calculi and colibacillemia and a rare occurrence in patients with biliary calculi without colibacillemia. The identification of the colon bacillus from the urine in patients with renal lithiasis should make one suspect the presence of biliary calculi, which are discovered in all cases properly investigated.

Klinische Wochenschrift, Berlin

11: 313-352 (Feb. 20) 1932

Protein Digestion During Nursling Age. E. Freudenberg.—p. 313.
Value of Antigen and Curative Result of Chemotherapy. H. Kroó. —p. 316.
Attempts to Cultivate Virus of Lymphogranuloma Inguinale. K. Meyer. —p. 318.
Hormonal-Nervous Regulation of Function of Anterior Lobe of Hypophysis.—p. 321.
*Early Reaction of Leukemic Spleen Following Roentgen Irradiation. F. Windholz.—p. 323.
*Significance of Small Salivary Glands for Lupus Vulgaris of Oral Mucous Membrane. A. M. Memmesheimer.—p. 326.
Pericarditis Following Pulmonary Infarction. P. Wermer.—p. 329.
Alimentary Alcoholemia. G. Dell'Acqua.—p. 330.
Roentgenologic Demonstration of Placenta in Animal Experiment. K. Ehrhardt.—p. 332.
Micromethod for Detection of Phagocytic Capacity of Leukocytes. G. Platonow.—p. 333.
Functional Test of Circulation by Determination of Amplitude Frequency Product. G. Schoenewald.—p. 334.
Identity of Icterus Gravis Familiaris Neonatorum with Congenital Erythroblastosis with Dropsy. A. Plaut.—p. 334.
Ammonia Formation During Various Contractions of Skeletal Muscles. J. K. Parnas.—p. 335.
Genetic Origin of Iso-Agglutinins on Basis of Blood Group Studies on Hogs. S. Schermer and A. Kaempffer.—p. 335.
"Acute Hemolytic Anemia" Lederer. F. P. Weber and O. B. Bode. —p. 336.

Early Reaction of Leukemic Spleen Following Roentgen Irradiation.—In summing up the results of his studies, Windholz finds that if during chronic myeloid leukemia the spleen is irradiated on three successive days with a total of 12 Holzknecht units, changes are noticeable fourteen hours after the last irradiation. The changes are characterized by a disintegration of the cells of the myeloid proliferations and by signs of degenerative changes on the connective tissue framework. The protoplasm of the myeloid cells shows an increase in oxyphilia before changes develop in the nuclei of the cells. The cells of the leukemic proliferations show more pronounced regressive changes than the cells of the connective tissue framework. The proteolytic reaction of the irradiated portion of the spleen shows (on Löffler-serum plates) a more rapid increase than do the nonirradiated portions. However, this difference in the reaction is equalized in twenty-eight hours. It is assumed that the difference in the proteolytic reaction is not due to the fact that the rays produce larger amounts of ferments but rather to their increased rapidity of diffusion as a result of impairment of the cell membranes by the irradiation. It seems possible that a portion of the histologically visible changes, especially those on the lattice fiber system, can be traced to the influence of the ferments that become liberated during cell disintegration. Thus the visible initial reaction of the spleen following roentgen irradiation has two components: a degenerative change in the cells as the result of direct ray influence, and apparently secondary changes (of the connective tissue framework); namely, demonstrably increased fermentative action in the irradiated tissue.

Significance of Small Salivary Glands for Lupus Vulgaris of Oral Mucous Membrane.—Memmesheimer emphasizes that, in oral lupus vulgaris as well as in other forms of tuberculosis of the oral mucous membrane, an involvement of the small salivary glands should be watched for. In characteristic older cases of the disease the involvement becomes manifest in a certain hardness of the disease focus and of the nodules. If involvement of the small salivary glands is suspected, a deep exploratory excision and histologic examination is necessary. As treatment the author recommends extirpation or deep destruction by means of a cold caustic.

Zeitschrift für Krebsforschung, Berlin

35: 415-542 (Feb. 20) 1932

Reduction of Vitality Produced by Photodynamic Action on Sensitized Tissues: Experiments with Tissue Cultures. A. H. Roffo.—p. 415.
Occurrence of Estrual Substance in Blood and Tissues Under Pathologic Conditions. F. Silberstein, O. O. Fellner and P. Engel.—p. 420.
*Influence of Bacterial Filtrates and of Toxins on Tumor Cells. S. Segre. —p. 428.
Surface Cells of Serous Membranes and Their Primary Malignant Tumors. Regina Grossek.—p. 435.
Involvement of Trachea in Generalized Lymphosarcomatosis. M. Plonskier.—p. 467.
Statistics and Genesis of Pulmonary Cancer. S. Derischanoff.—p. 481.
Biochemistry of Rous Sarcoma of Chickens. V. Morávek.—p. 492.
Idem. V. Morávek.—p. 509.
*Influence of Endocrine Glands on Development and Behavior of Experimental Cancers. W. Karnicki.—p. 523.

Influence of Bacterial Filtrates and of Toxins on Tumor Cells.—Segre first studied the influence exerted by filtrates of bouillon cultures of various bacteria on suspensions of different carcinoma cells. He observed that some filtrates are capable of attacking the cells of certain suspensions. The activity of the various filtrates against the different cell suspensions varies, and the susceptibility of a carcinoma cell suspension toward the various culture filtrates differs likewise. If carcinoma cell suspensions are exposed to the influence of true bacterial toxins, it can be noted that the influence is much less pronounced than if they are exposed to twenty-four hour culture filtrates of nontoxic bacteria. It was also noted that there is no relationship between virulence, pathogenicity and toxicity of a type of bacteria, and the capacity of its culture filtrates to attack tumor cells.

Influence of Endocrine Glands on Development of Experimental Cancers.—Karnicki studied the influence exerted by the organs of internal secretion on the neoplasms produced by application of tar on the ears of rabbits. He observed that the removal of the thymus influences the development of the neoplasms so that the growth is four times more rapid than usual. Extirpation of the thyroid and of the accessory thyroid likewise effects accelerated development of the neoplasms, but in a somewhat lesser degree than in extirpation of the thymus. The tumors show a great tendency to horny, conical formations. Since the thyroid plays an important part in the calcium phosphorus equalization and also has a great influence on the sympathetic nervous system, it is easily understandable that its removal produces favorable conditions for the development of neoplasms. After removal of the testes there is a less pronounced acceleration in the development and in the growth of the neoplasms than after extirpation of the thymus or the thyroid, but it is nevertheless considerable. Extirpation of a suprarenal inhibits the development and growth of the neoplasms, and a pronounced cachexia develops and progresses rapidly. If testes and thymus are removed simultaneously in the same animal, a considerable stimulation of the growth of the nodules is noticeable. In the later phases there is again a decrease, and the growth is less than in animals in which only the thymus or only the testes have been removed. Transplantation of thymus and of testes has an inhibitory effect on the development of neoplasms. The character of the precancerous formations in these cases resembles those that are observed in the suprarenalectomized animals. The neoplasm remains small, and cachexia is absent. Intravenous injection of preparations from thymus and testes effects a drying up of the nodules and destruction of the small growths. The larger nodules decrease in size and become soft after a certain number of injections. In the conclusion the author points out that his results not only prove his own theories but are identical with the results of a considerable number of investigators.

Zentralblatt für Chirurgie, Leipzig

59: 513-576 (Feb. 27) 1932

After-Treatment of Stump Following Amputation. Verth.—p. 515.
*Fracture of First Rib Caused by Muscular Traction. A. Adler.—p. 518.
*Fat Embolisms. E. Makai.—p. 521.
Remarks on Schmieden's Operation for Inguinal Hernia. A. Carraro. —p. 524.
Reply to Preceding Article. V. Schmieden and H. Niessen.—p. 528.
Sterile Plaster Bandage. Vömel.—p. 528.
Pyloric Stenosis Caused by Developmental Anomaly of Liver. H. Baumecker.—p. 529.

Fracture of First Rib Caused by Muscular Traction.—Adler points out that fractures of ribs caused by muscular traction are comparatively rare but, if they occur, it is usually the lower ribs that are involved. Fracture of the upper ribs, especially of the first one, by muscular traction is considered by some as impossible, yet several such cases have been reported in recent years. The author reports the case of a man, aged 54, who, while lifting a basket weighing about 20 Kg. (44 pounds) suddenly felt a cracking sound and then a severe pain in the region of the right scapula. A piercing pain persisted in the region of the shoulder and of the axilla, the neck became stiff, and the arm hung lifeless, only the fingers being movable. At first the diagnosis was not entirely clear, but fixation of the extremity brought relief. A few days later the patient stated that, although there was less pain, the slightest movement of the right shoulder joint and deep inspiration caused a cracking noise. Renewed examination of the patient corroborated this and roentgenoscopy revealed a transverse fracture of the first rib at the junction of the bone and cartilage. In discussing the causes of this fracture the author expresses the opinion that inadequate innervation of the muscles is one of the causal factors. That a greater brittleness of the bones, which may also be a causal factor, was not the cause in this case was proved by roentgenograms of several of the patient's bones, which were entirely normal. In the conclusion the author states that he shares Porzelt's theory of pathogenesis. Porzelt, who observed a case similar to that described by the author, maintains that the rib is extended not only by the lung, inflated by maximal inspiration, but also by forced tension or upward traction of the scaleni and the subclavius muscles; on the other hand, the arm lifting the load and the traction of the muscles of the chest press the clavicles on the extended first rib, and thus these two opposing forces cause a fracture.

Fat Embolisms.—Makai reports the clinical history of a man, aged 56, who sustained a complicated fracture of the leg. The fracture was reduced and then fixed with a plaster-of-paris splint. At first the patient was completely conscious, so that he was able to give orders and to read, but on the following day he became unconscious and restless. This condition persisted for several days, and when on the sixth day he came under the author's observation, a cerebral embolism was assumed and the injured extremity was immediately amputated. The improvement in the patient's condition was so evident after the amputation that a causal relationship can hardly be doubted. This case corroborates Kirschner's theory, who maintains that fat embolism not only develops immediately following a fracture but may develop later as result of incomplete fixation. If more and more fat enters the circulation, the sequelae, especially the cerebral symptoms, increase in severity, but if the source of the fat embolism is excluded the patient may recover. The author thinks that fat embolism may perhaps be more frequently the cause of temporary disturbances after injuries than is commonly believed. He suggests that the bronchopneumonia which so frequently develops in older persons after a fracture may be due to pulmonary fat embolisms. In regard to the treatment, he states that, in severe fractures with cerebral symptoms and shock, care should be taken to prevent repeated fat embolisms. Since in complicated fractures absolute immobilization may be difficult, amputation should not be shirked, for it may save the patient's life. Otherwise it can be attempted to counteract the threatening symptoms by resorting to venesection with subsequent infusion of sodium chloride or of sugar solutions, and by administration of epinephrine and solution of pituitary.

Zentrablatt für Gynäkologie, Leipzig

56: 513-576 (Feb. 27) 1932

Plastic Surgery of Uterus According to Strassmann, with Subsequent Confinement. W. Hannes.—p. 514.
Rupture of Gravid Double Uterus. W. Rosenstein.—p. 517.
*Therapy of Puerperal Pyemia by Ligation of Veins. W. Schellenberg. —p. 519.
Further Modification of Cesarean Section According to Portes. B. Aschner.—p. 523.
Chemical Contraceptives. M. Rodecurt.—p. 526.
Technic of Vaginal Surgery. M. Samuel.—p. 531.
*New Pregnancy Test on Male Mice by Means of Hormone Concentration. J. Czyżak.—p. 533.

Therapy of Puerperal Pyemia by Ligation of Veins.—In order to gain insight into the mortality of puerperal pyemia when conservative treatment is employed and thus to be able to estimate the urgency of a more radical treatment, Schellenberg studied the histories of patients with puerperal pyemia who

received treatment in the women's clinic in Zurich in the years from 1911 to 1930. On the basis of these studies he concludes that early operation in puerperal pyemia can be dispensed with, since within a short time a definite diagnosis can hardly be reached, and thus many patients would be subjected to ligation in whom pyemia either does not exist or is so mild that spontaneous cure sets in. If ligation of veins had been resorted to after the third attack of chills, in more than 56 per cent of the cases studied by the author the patients would have been unnecessarily exposed to the dangers of a surgical intervention, and if it had been done after the second attack over 67 per cent would have been operated on without need. A late operation after a fourth attack of chills is advisable only in exceptional cases, since the mortality rate is about equal whether conservative treatment is done or operation is resorted to. The small difference in the percentages does not justify the exposure of the patient to the possibility of the failure of the operation.

New Pregnancy Test on Male Mice by Means of Hormone Concentration.—Instead of using female mice as in the Aschheim-Zondek pregnancy test, Czyżak made the test on male animals. He found that only a urine with concentrated hormonal content produced visible changes and he therefore injected the test animals with a concentrated urine. He describes the technic of the concentration and of the injection and states that after 100 hours the test animals showed a considerable increase in the size of all the accessory sex glands, especially the seminal vesicles. The test was made in 100 cases; namely, in 66 cases of early pregnancy, 18 cases of adnexitis, 10 cases of ruptured tubal pregnancy and 6 cases of ovarian cysts. In evaluating his test he takes the Aschheim-Zondek test as the standard of comparison. He admits that the use of female mice has two advantages over his use of male animals: 1. The reaction on female animals permits a differentiation of the presence of prolan A and prolan B. 2. The reaction is more exact, for while in male animals the size of the sex organs has to be compared, in female animals the presence or absence of hemorrhagic spots or of yellow bodies serves as an indicator. However, in spite of its deficiencies the author considers his test a valuable supplement to the Aschheim-Zondek reaction. An advantage is that in using males there is always a sufficiency of animals and the test requires only three animals instead of at least five, as for the Aschheim-Zondek reaction.

Vestnik Rentgenologii i Radiologii, Leningrad

9: 359-473, 1931

Mitogenetic Irradiation in Experimental (Tar) Cancer. S. Ya. Zalkind and L. M. Shabad.—p. 359.
Mitogenetic Irradiation of the Larvae of Saccocirrus. S. Ya. Zalkind. —p. 370.
*Clinical Aspect of Radiotherapy in Cancer of Larynx. K. N. Chochia. —p. 372.
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Radiology in Treatment of Cancer of Larynx.—According to Chochia, the predominant types of cancer of the larynx are basal cell, prickle cell and occasionally adenocarcinomas. Surgical treatment consists in radical excision of the cancer and the metastases in the lymph nodes. When the tumor has spread to the vocal cords, the ventricles and the cartilages, total extirpation of the larynx is indicated. This results in death in 50 per cent of the cases and with but few exceptions recurrence in the rest. The latter intervention and the results are so serious that few patients consent to the operation. Aside from surgery, radiotherapy (roentgen rays and radium implantation) was used. During the period 1919-1930, 112 patients (110 men and 2 women) were treated: 63 with roentgen rays, 33 with radium implants, and the rest with both roentgen rays and radium. The author concludes that radiotherapy, as well as surgical intervention, does not give striking results, although improvement is possible in a small percentage of the patients.

Radiotherapy in Malignant Tumors of Urinary Bladder.—Grosman treated thirty-nine patients with malignant tumors of the urinary bladder and nine patients with malignant tumors of the prostate. A review of the literature and the results of his own studies did not aid him to resolve on a conclusive treatment. Surgical measures were not sufficient and were indicated only in the early stages. Radiotherapy, and especially radium implantation, was an improvement, since it could be used not only in operative but also in neighboring and sometimes inoperable areas.

Roentgen Therapy in Climacteric Deficiency Phenomenon.—The climacteric deficiencies manifested in the study of Shekhter and Duboviy were mostly of a vasomotor character: flow of blood to the head, changes in cardiac rhythm, dizziness, palpitation of the heart, ringing in the ears. In many patients, arthritic symptoms and psychic disturbances were also present. Small doses of roentgen rays were given to thirty patients; in nineteen instances the hypophysis was irradiated, in seven instances the thyroid, and in four the hypophysis and the thyroid. In eighteen, or 60 per cent, of the patients the active hyperemia completely disappeared, and the palpitation of the heart and attacks of dizziness decreased; the ringing in the ears disappeared and sleep was improved. In nine, or 30 per cent, of the patients the active hyperemia became less intense. No change was noted in three, or 10 per cent, of the patients. Recurrences limited to active hyperemia occurred in a few instances from six to eight months after treatment; but these did not return after a second series of treatments. In the four instances, in which irradiation of one gland was unsuccessful and the other gland was subsequently irradiated, improvement was noted in one case only. The authors believe their favorable results substantiate the observations of Bokar, who believes that roentgen rays help to remove a hyperfunction in either the hypophysis or the thyroid.

Cancerous Metastasis of Bone Simulating Primary Sarcoma.—Korkhov and Mintz state that neoplastic metastasis in the bones may often mask the primary manifestations. He describes two personal observations. In one case, an osteoclastoma of the left scapula was found on roentgen examination to be secondary to a cancer of the left bronchus. In the second instance, roentgenograms proved the primary manifestation to be an ulcus carcinomatosum of the stomach with metastases in the pelvis, rib, pleura and lungs. The diagnosis before roentgenography in the second instance was sarcoma of the pelvis.

Rare Localization in Osteochondropathy.—Dubrovskaya describes an observation in which the diagnosis, after roentgenography of the 12 year old patient, was neoplasm of the proximal end of the fifth metatarsal bone of the left foot. The right foot showed similar but less intense changes. The author states that the change in the left foot was the result of a pathologic fracture of the necrotic bone with subsequent spreading of the necrosis. In the right foot the spread of the necrosis took place without a previous fracture.

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*Roentgen Picture of Normal and Pathologic Sella Turcica. H. Scheuermann.—p. 213.

Roentgen Picture of Normal and Pathologic Sella Turcica.—Scheuermann examined roentgenograms of the cranium of 391 patients with a normal sella turcica and of 55 with brain conditions showing pathologic changes, and made comparative examinations of specimens of normal sella turcicas from 100 patients and of sella turcicas from forty-one with intracranial disorders. The technic in roentgen examination of the cranium, normal anatomy and roentgen pictures of sella turcica, position of the head in certain tumors of the brain, and primary and secondary enlargement of the sella turcica are discussed. There has been close agreement between the results of roentgen examination and of necropsy. The roentgenologist, he says, is to express himself concerning the pathologic changes revealed but to speak with reservation concerning the possible primary or secondary nature of the changes.